



HEALTH OF PLYMOUTH

DURING THE YEAR 1895.

BY

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CONTENTS.

	Page.
Report for the Year	6-10
General Sanitary Condition	11-15
Area—Population—Boundaries—Rateable Value Inhabited Houses	11
Site and Soil... ..	11-13
Water Supply	13
Sewage, Disposal and Drainage	14-15
Vital and Mortal Statistics	16-28
Table showing the Total Tenements and Number of Persons occupying Tenements with less than Five Rooms in 12 Large Towns	18
Comparative Mortality Table	22
Mortality at Different Seasons	23-24
Chart showing Mortality from all Causes ...	Face 25
Table I, showing the estimated Population, Marriages, Births and Deaths for the year 1895, and 10 years preceding	25
Table II, showing the Density, Birth-rate, Death-rate, Zymotic-rate, and Infantile Death-rate, for the year 1895, and 10 years preceding	26
Table III, showing the number of Deaths, from the Principal Zymotic Diseases for the year 1895, and 10 years preceding	27
Table IV, showing the relative Mortality Rates from the Principal Zymotic Diseases for the year 1895, and 10 years preceding	28
Zymotic Diseases Chart	Face 28

	Page.
Localized Mortality Rates	29-35
Infantile Mortality	32
Illegitimacy	33
Certification of Causes of Deaths	33-35
Tables showing causes of Deaths at different periods of life in the Borough	36-48
Respiratory Diseases Chart	Face 48
Prevalence of Disease	48A-52
Measles	48C
Whooping Cough	48C
Influenza	49
Scarlatina	49
Enteric Fever	49
Small Pox	49
Vaccination	50
Diphtheria and Membranous Croup... ..	51
Puerperal Fever	51
Diarrhœa	52
Borough Hospital	52
Hospital Ship <i>Maud</i>	52
Report of Mount Gould Hospital	53
Report of Hospital Ship <i>Maud</i>	54
Notification of Infectious Diseases Chart	Face 55
Notification of Infectious Diseases Tables	55-56
Monthly Table of Deaths from All Causes and Zymotic Diseases, with the rate per 1,000 per annum	57
Zymotic Diseases—Street List, 1895... ..	58-70
Slaughter Houses... ..	71

PART II.

Meteorological Report	72-80
Meteorological Tables and Remarks	81-93
Meteorological Appendix	94-96


PART III.

Report of Borough Analyst	97-99
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PART IV.

	Page.
Report of Port Medical Officer ...	100-101
Cases of Sickness Reported to the Port Sanitary Officials and seen by the Port Medical Officer during the year 1895...	102-108

Table of Deaths during the Year 1895, classified according to Diseases, Ages and Localities...	End of Book.
Table of Population, Births, and New Cases of Infectious Sickness, &c. ...	End of Book.



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Report for the Year 1895.



MEDICAL OFFICER OF HEALTH'S DEPARTMENT,
MUNICIPAL OFFICES, PLYMOUTH.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour of submitting to you my FIFTH ANNUAL REPORT upon the health of the Borough for the year 1895, and upon the work of the department during that period.

With the report on the public health of the Borough is combined that of the floating population of the port, both being intimately associated.

As in former reports, the thirteen ecclesiastical parishes have been dealt with as separate districts, being areas of known extent and population.

HOUSING OF THE WORKING CLASSES.—During the year the scheme for the better Housing of the Working Classes has assumed definite shape. A contract has been entered into with a builder for the erection of sixty-two houses, the work being publicly inaugurated by the Mayor laying the foundation stone in the month of August. The arrangement of the houses is an excellent one, and will, I am of opinion, meet the requirements of those for whom they are designed, each occupier will practically have independent domestic offices

and conveniences. Several of the houses are nearing completion, the execution of this work will go far to solve a problem which is vital to the well-being, morally and physically, of the great bulk of our working population.

PUBLIC BATHS AND WASH-HOUSES.—In reference to these buildings I can only repeat my statements made in former reports, their condition remains the same. I trust that during the coming year the Corporation will see their way to reconstruct and remodel our Public Baths and Wash-houses, the maintenance of which in all large populations is a most valuable factor in sanitation.

PUBLIC MORTUARY.—During the year real progress has been made towards the provision of an efficient Mortuary, the usual enquiry has been held and the necessary borrowing powers have been obtained, tenders are to be advertised for the construction of the building forthwith.

STEAM DISINFECTOR AND DISINFECTING STATION.—The Station has now been in work since January without a hitch, 3568 articles of bedding, clothing, carpets, &c., have been disinfected. The substitution of a thoroughly efficient system of disinfection, for the inefficient method formerly in use, must be of the greatest potentiality in arresting the extension of infectious diseases in households, the effect of efficient disinfection combined with the isolation of infected cases in hospital has been most marked, in the reduction of the number of cases of scarlatina reported. There has been during the past four years an increasing diminution in these cases.

ISOLATION HOSPITAL.—During the year the first of the new ward pavilions, together with bath house and porter's lodge has been completed. The new buildings were officially opened by the Mayor on the 23rd October, 1895.

The completion of further accommodation for the isolation and treatment of the infectious sick cannot fail to be of the greatest service in the prevention of epidemic disease, as year

by year an increasing proportion of those suffering from infectious diseases seek the benefits of the hospital.

I trust that the Committee will, during the coming year, proceed with the erection of the administrative block, as this is the most pressing requirement at present. Its completion will terminate the present objectionable system that obtains, whereby the staff occupy the same building as the infected sick ; the food is also prepared in the same building for patients and staff alike.

REFUSE COLLECTION AND DISPOSAL.—The same unsatisfactory method of collecting and disposing of the town refuse still obtains, the work is carried out by a contractor who disposes of the refuse by carting or barging it into the surrounding districts where it is utilized as manure ; under certain conditions and during certain seasons it is practically impossible to dispose of the soil in the manner stated, with the result that huge accumulations remain at the soil depôt, a nuisance and a danger.

I regret that owing to the uncertainty of the extent of the district to be provided for, the scheme for the better disposal of house refuse has been delayed, and beg to impress upon you the desirability (not only in the interest of the health of Plymouth, but also in the interest of those districts surrounding it, to which refuse is now sent for agricultural and other purposes) of devising and carrying out as expeditiously as possible, a complete system of refuse destruction or refuse disposal, or a combined system of destruction and disposal, which shall give the urban inhabitants the full advantages which quick removal confers, accompanied by a minimum of annoyance, and a maximum of benefit to the agricultural districts which consume such part of our refuse as has a high manurial value.

I trust that in the near future the Corporation will carry out the

work of collection and disposal ; until the work is carried out in this way we cannot hope or expect any improvement in the present system.

HOUSE TO HOUSE INSPECTION.—Under the Bye-laws for houses let in lodgings, systematic inspection has been carried out, two days in each week being devoted to this work by the inspectors. During the year 4,700 visits of inspection have been made in this way, resulting in the carrying out of 1,800 sanitary improvements in this class of house alone.

As a result of complaints being received of sanitary defects existing, or of infectious sickness being reported, some 4,350 visits have been made, resulting in 1,791 sanitary improvements being made or defects remedied.

FOOD INSPECTION.—During the year the inspection of meat fish, fruit, and other articles of food has been continuously carried on by your officials, resulting in the seizure and destruction of 14 tons of fish, and 5 tons of meat which was unfit for food.

Under the sale of Food and Drugs Act, 101 samples have been submitted to analysis during the year. Two prosecutions under the Act were undertaken, both resulting in convictions. In each case milk was the sophisticated article.

COWSHEDS, DAIRIES, MILKSHOPS, AND BAKEHOUSES.—During the year 4,185 visits of inspection have been made to these. The general sanitary condition of this class of premises has materially improved during the past four years, due in great measure to the systematic inspection they are subject to, and to the requirements of the Acts being carried out. The registration of milk shops, together with the surveillance exercised over them, has caused a considerable decrease in their number, the occupiers preferring to cease the sale of milk

rather than comply with the sanitary requirements, it is absolutely essential that all premises in which any article of food is prepared or stored, should be in a satisfactory sanitary condition.

WATER SUPPLY.—During the year very considerable progress has been made in the necessary work for the provision of the Burrator Storage Reservoir, the preliminary work of excavating and quarrying at the site of the two dams has been completed, in November the actual work of constructing them commenced. The leat is still being used in conjunction with the pipes for the conveyance of water from Burrator to Roborough, still leaving our water supply open to the suspicion of pollution, and until the water supply of the Borough ceases to be conveyed by the leat, the inhabitants will be exposed to the danger resulting from certain forms of pollution.

In conclusion I must express my appreciation of the manner in which the work of the Sanitary staff has been carried out during the past year; their duties are year by year increasing and their work becomes more arduous, I also fully appreciate the tact displayed in dealing with the public, thereby avoiding unnecessary friction in carrying out the work of the department.

I again take this opportunity of expressing my thanks to the medical profession of the Borough for their assistance and co-operation.

To the Chairman and Members of the Sanitary Committee I offer my warmest thanks for their support.

I have the honour to remain,

Gentlemen,

Your obedient Servant,

J. M. Williams

General Sanitary Condition of the County Borough of Plymouth at the end of the year 1895.

Borough of Plymouth—Area—Population—Boundaries —Rateable Value—Inhabited Houses.

The area of the Borough is 1,491 acres, which includes the island of St. Nicholas, in the parish of St. Andrew. Population calculated to the middle of 1895, 89,096. The Borough consists of two parishes, St. Andrew and Charles; which are again sub-divided into thirteen ecclesiastical districts, namely St. Andrew, St. Peter, St. Saviour, St. James, All Saints, Christ Church, St. Matthias, Holy Trinity, Charles, St. Jude, St. John, St. Luke, and Emmanuel.

The limits of the Urban Sanitary District are co-terminus with those of the County Borough of Plymouth.

The district is bounded on the north by the parishes of Egg Buckland and Stoke Damerel, on the west by the township of Stonehouse, on the south by the waters of the Sound, on the east by the parish of Egg Buckland.

The rateable value of the Borough is £328,679.

The number of houses in the Borough is 10,840, of which 140 have been built during the year.

Site and Soil.

The town of Plymouth is situate in Lat. 50-23 N., Long. 4-10 W. The site of the town is on the southern slope of the foot hills of Dartmoor. The town with its environs stands upon the slate and limestone of the middle Devonian series.

The limestone forms a broad band next the sea, broken through at the entrance of Stonehouse Pool, Millbay, Sutton Pool, and by the Plym. It rises to an average height of 100 feet ; the slate hills to the north reaching that height within the area of the Borough at Headlands, the highest point of the North Hill ridge. The junction of the limestone with the slate runs roughly parallel on the line of the Millbay Road and George Street, crossing that line to the northward on the west, and to the southward on the east ; along this junction are the most productive wells in the district, though there are many good ones also in the slate.

At the north-western corner of St. Andrew's Churchyard there rises a boss of volcanic rock—and interbedded lava—known as dunstone, which occurs in considerable quantity immediately beyond the outskirts of the Borough at Manna-mead. There is also a considerable area of low lying alluvial ground in the vicinity of the Octagon, extending thence to all sides. This formed part of the ancient bed of Surpool, and retained a marshy character in part until recently. Much of it is below the level of high water spring tides, and where the alluvium lies deepest, its depth has not been ascertained.

There is also a belt of low reclaimed land round Sutton Pool but of less practical importance from a geographical point of view. The limestone rocks are compact in themselves, but broken by frequent joints and fissures, and contain numerous caverns which provide a system of underground drainage.

The slate rocks vary considerably in character, from the loose broken material locally known as "shillet" to the compact red and purple slates, which is locally distinguished by the absence of water bearing qualities. As a rule, however, the slate rocks admit freely of percolation of rain and sewage, and the shallower wells sunk in them used to be carefully examined if intended for potable purposes. Some of the deeper wells, however, yield both an abundant and an excellent supply.

The alluvial area excepted, the geological condition of Plymouth, and the contours are singularly favourable for the site of a large town, the subsoil as a rule is shallow, particularly on the limestone.

Water Supply.

The Waterworks of Plymouth belong to the Corporation. The supply of water is entirely by gravitation, and is obtained from the upper reaches of the watershed of the River Meavy on Dartmoor. The gathering ground is about 4,885 acres, or $7\frac{1}{2}$ square miles, in extent, and lies between 700 and 1,700 feet above the sea level. The rocks composing it are of igneous origin, mostly granitic, but a small area is of the altered Devonian.

The scheme for the construction of a Storage Reservoir in the Burrator Valley is progressing rapidly, and, as I have mentioned in a former paragraph, the actual work of constructing the main and subsidiary dam has commenced, until this work is completed, the water supply of the Borough cannot be said but to be in an unsatisfactory condition as regards the permanence of a plentiful supply during times of drought; the capacity of the Service Reservoirs being only equal to three days supply. The completion of the Storage Reservoir will also allow of the town water service being constant, instead of as at present intermittent, a system that involves many dangers to the consumers.

The water is very soft— $1\frac{1}{2}$ degrees of hardness—and is eminently suitable for domestic and trade supplies. The quantity supplied per head, including that for trade purposes, is $42\frac{1}{2}$ gallons per day.

The storage capacity of the new Burrator Reservoir when completed will be five hundred million gallons, sufficient for the supply of a population of 130,000 persons (present population supplied, 91,000) for 130 days at the rate of six million gallons per day (present daily supply 4,000,000 gallons).

Sewage, Disposal, and Drainage.

The sewage of the town (with the exception of that of a small district on the west of Mutley Plain) is discharged into the harbour by four outfalls at different points. The sewage receives no chemical or other treatment before its discharge.

The Borough for drainage purposes is divided into five districts or drainage areas, each having its own outfall.

The largest area includes the western half of the town, taking the Tavistock Road as the dividing line. The sewage from this district is discharged by an outfall at Millbay, close under the western end of West Hoe Terrace ; it is discharged only on the ebb tide, the sewage accumulating during the flood tide in a large impounding sewer recently constructed. The sewage from the area to the east of Tavistock Road is discharged into Cattewater at Deadman's Bay during the ebb tide, the sewage accumulating during the flood tide in an impounding reservoir. The greater part of the parish of St. Saviour, about eight acres, forms another small area, draining into the Harbour at Fisher's Nose.

The area formed by the portion of the north-east part of the Borough to the east of Mutley Plain, drains into the sewer of the Compton Gifford Local Board, by arrangement, and is treated chemically, in the settling tanks owned by that Board the sludge being removed, the remaining liquid is discharged into the Laira.

The remaining area, is that portion of the Borough north of the North Road as far as Mutley Station. The sewage from this district is received into the Stonehouse and Compton joint sewer, discharging into the harbour at the eastern point of Firestone Bay during the ebb ; during the flood tide the sewage is retained in the low level sewer.

The present scheme provides outfalls in deeper water than those of existing sewers. The outfalls of Rusty Anchor and Fisher's Nose will be in five and three fathoms of water, respectively, and well in the tide way.

In my last report I ventured to point out that while it was not for me to speak on engineering questions, it would be necessary for you to watch all schemes for the disposal of the sewage of the districts on the borders of the Borough where their means of sewage disposal were open to serious objections on sanitary grounds.

I am glad to observe that my views have been acted upon, and that the scheme of sewage disposal propounded by the Plympton Rural District Council and Compton Urban District Council respectively, were vigorously, and so far as I gather, successfully opposed. These schemes involved the discharge of sewage into the Laira estuary. I regard such a discharge as open to grave objection. It is the aim of all sanitarians to remove from centres of population as far and as expeditiously as possible all sewage and other organic decomposing substances. The proposals for Plymouth and neighbourhood made by Mr. Mansergh appear to me to satisfy this requirement to a greater extent than any proposal yet before you. Whether on engineering and financial grounds it would be practicable to produce the outfalls still further seaward, or to fix upon any point where sewage matter could be delivered with a better prospect of more rapid and innocuous disposal, I am not competent to form an opinion, but speaking solely from the point of view of the sanitarian, I must re-iterate the opinion I have very frequently expressed, that the most perfect scheme in my judgment is that which satisfies most nearly the conditions I have before referred to.

All schemes which would deliver sewage, whether treated or untreated (for as experience sometimes shews, untreated and treated mean the same thing) into the rivers and estuaries which surround the Borough are open to objection.

I hope that the attitude of watchfulness hitherto observed by the Council in this matter will continue.

Vital and Mortal Statistics.

THE AREA OF THE BOROUGH.—1,491 acres.

POPULATION.—At the census taken in April, 1891, the population was 84,248, and it is estimated that at the middle of 1895 the population of the Borough was 89,096.

DENSITY.—The mean density of population is 59·7 persons per acre. The average of 59·7 is greatly exceeded in different parts of the Borough, as will be seen by reference to the localized mortality rates.

INHABITED HOUSES.—10,840 estimated number ; 140 have been built during the year.

Distribution of Population.—The population is unevenly distributed over an area of 1,491 acres, the mean density being 59·7 persons per acre. The population density of the thirteen districts into which the Borough is divided varies from 21 persons in St. Jude's to 207 in Trinity.

The average number of persons per house is 8·5, whilst Liverpool (the most densely populated town in the country) averages 6 persons per house ; Derby 5 persons ; Portsmouth 5·6 persons per house.

The proportion of the inhabitants occupying tenements is considerably in excess of any of the large towns. Of a population of 87,931 some 50,942 persons occupy tenements of 1, 2, 3, or 4 rooms. This ratio is enormously increased as

compared with other towns when we take the proportionate number of persons occupying one and two rooms; as will be seen from the appended table.

Towns.		Ratio of Population occupying tenements of 1, 2, 3. and 4 rooms.	Ratio of Population occupying 1 room tenements.	Ratio of Population occupying 2 room tenements.	Ratio of Population occupying 3 and 4 room tenements.
Manchester	...	0·497	0·007	0·068	0·421
Liverpool	..	0·406	0·036	0·078	0·291
Birmingham	...	0·534	0·005	0·028	0·500
Bristol	...	0·372	0·035	0·095	0·241
Leicester	..	0·195	0·001	0·038	0·157
Portsmouth	...	0·180	0·012	0·037	0·131
Cardiff	...	0·260	0·007	0·077	0·176
Bolton	..	0·650	0·001	0·064	0·585
Preston	...	0·402	0·002	0·016	0·385
Derby	...	0·206	0·002	0·021	0·184
Plymouth	...	0·605	0·134	0·235	0·235
Wolverhampton	..	0·472	0·015	0·062	0·409
Averages	...	0·390	0·0214	0·0682	0·3096

Table showing the Total Tenements and Number of Persons occupying Tenements
with less than Five Rooms, in 12 large Towns.

CITIES AND BOROUGHs.	Total Tenements.	No. of tenements with less than five rooms.	No. of Persons occupying.				Total.
			1 room tenements.	2 room tenements.	3 room tenements.	4 room tenements.	
Manchester	103,720	57,463	3,694	34,650	23,423	189,614	251,381
Liverpool	104,890	51,135	18,627	40,460	61,620	89,410	210,117
Birmingham	98,219	57,147	2,307	13,658	165,264	73,940	255,169
Bristol	48,140	23,826	7,799	21,190	24,863	28,640	82,492
Leicester	36,147	9,042	209	6,617	4,266	23,058	34,150
Portsmouth	33,980	9,435	1,991	5,918	6,792	14,066	28,767
Cardiff	25,353	9,117	969	9,933	7,997	14,695	33,594
Bolton	23,663	16,364	115	7,430	4,279	63,007	74,831
Preston	22,679	10,439	177	1,711	5,099	36,281	43,268
Derby	19,371	4,882	154	1,927	3,077	14,244	19,402
Plymouth	19,647	14,385	11,301	19,835	12,113	7,693	50,942
Wolverhampton	16,262	8,454	127	5,152	6,362	27,436	39,077

Marriages.—The number of marriages recorded in the Borough during 1895 was 909, equal to a marriage-rate of 10·2 per 1,000 persons living, as against 864 for the previous year.

Births.—The Births registered during 1895, numbered 2551, and comprised those of 1279 males and 1272 females. The Birth rate for the past year was 28·7 per 1,000, the lowest recorded rate. The Births and Birth-rates for the past ten years are as follows :—

		Number of Births.		Birth-rate per 1,000.
1886	...	2,416	...	30·5
1887	...	2,433	...	30·3
1888	...	2,454	...	30·2
1889	...	2,505	...	30·4
1890	...	2,405	...	29·3
1891	...	2,508	.	29·6
1892	...	2,483	...	29·0
1893	..	2,590	...	29·8
1894	...	2,528	...	28·8
1895	...	2,551	...	28·7

During the year the Birth-rate in the Borough has continued its decreasing tendency, although not to such an extent as the average of the past ten years. As in former years it is below the average of the 33 great towns, and also below the rate of England and Wales. The Birth-rate for 1895 is the lowest reached in the Borough.

The National Birth-rate which, with few exceptions, has shewn a yearly decrease, was for the year 1895, 30·3 per thousand, and is 0·9 per 1,000 below the average rate in the ten years 1885-94.

The natural increase of the population, or the excess of births over deaths during the year was 751. The estimated increase in the population was 1,165.

Deaths.—The number of deaths registered as having occurred in the Borough and at Blackadon Asylum during the year, was 1,800 as against 1,596 for the year previous, an increase of 204, this increased mortality occurred during two months namely February and March, which were characterized by most inclement weather—severe frost continued practically throughout these months. The mean temperature being below the average for the previous ten years. The principal increase in the numbers of deaths was in that of aged females. The increase in the deaths of males was a comparatively small one. The increase of 204 deaths during the year, consisted of 61 males and 143 females, the cause of death in the majority of the cases being from disease of the respiratory organs.

The gross annual rate uncorrected for the sex or age distribution, and based upon the estimated population, is equal to 20·2 per 1,000; this will give a ratio of one death to every 49·5 persons during the year.

The increase in the mortality rate throughout the country is general as compared with that of 1894.

	No. of Deaths.	Uncorrected Death rate per 1,000.	Corrected Rate
1886*	- 1,805	- 22·8	- 22·3
1887	- 1,764	- 21·9	- 21·4
1888	- 1,734	- 21·3	- 20·8
1889	- 1,982	- 24·0	- 23·5
1890	- 1,759	- 21·1	- 20·6
1891	- 1,900	- 22·4	- 21·9
1892	- 1,616	- 18·8	- 18·3
1893	- 1,860	- 21·4	- 20·9
1894	- 1,596	- 18·2	- 17·8
1895	- 1,800	- 20·2	- 20·0

As is usual the Public Institutions have been considered for statistical purposes as separate localities.

The deaths of persons from other districts occurring in these institutions (which are registered here and tend to increase our rate), are eliminated in calculating the corrected annual rate, which is 20·0, as against 20·2 the recorded rate.

The population density of the Borough is equal to 59·7 per acre, and is increasing year by year, in some portions of the Borough the density is upwards of 200 per acre. Plymouth next to Liverpool being the most densely populated town in England and Wales.

As might be expected under such conditions the general mortality rate would be above the average urban rate, taking the average of the past ten years the rate is 21·2 as against the general urban rate of 19·7.

Not only have we an abnormal population density, but we have a greater proportion of our population living in tenements than that of any of the large towns.*

In previous reports I have pointed out these facts, and take this opportunity of doing so again to impress it upon the minds of the members of the Council and also on the minds of the public, so that the action that is being taken at the present time by your Committee, and their future policy in regard to relieving the congested areas of population may receive the unanimous approval of the Council and the inhabitants of the Borough.

I have appended a table giving the comparative mortality, births, and density rate for 20 of the large towns, and the average of the 33 large towns as given by the Registrar-General.

* As the mortality of any given area bears a direct ratio to the number of its inhabitants, and also that while the general mortality is greatly increased in tenement populations, the mortality from diseases of the respiratory organs amongst children is quadrupled. Having a knowledge of these facts it is clearly the duty of the municipal body, through your Committee, to reduce the existing overcrowding and distribute the population of the densely populated areas over those vacant areas within the Borough.

Comparative Mortality Table.

Shewing the Estimated Population, Density, Birth-rate, Death-rate, Zymotic-rate, and Infantile Death-rate of 20 large towns of England and Wales for the year 1895.

Cities and Boroughs.	Estimated Population in the middle of 1895.	Persons to an Acre (1895)	Birth- rate.	Death- rate.	Zymotic rate.	Deaths under 1 year to 1,000 Births
33 Large Towns ...	10,591,530	35·3	31·3	20·6	2·84	182
London.....	4,392,346	58·8	30·5	19·8	2·63	166
Manchester	524,865	40·7	33·6	25·2	3·72	204
Liverpool	503,967	96·7	36·8	28·8	4·01	211
Birmingham.....	496,751	39·1	32·4	20·3	2·66	184
Leeds	395,546	18·3	31·6	20·5	2·69	192
Sheffield	342,768	17·4	34·8	20·4	3·17	198
Bristol	228,139	51·1	28·9	18·1	1·29	144
Nottingham	226,658	20·7	29·7	19·0	2·23	191
Hull	216,722	26·3	34·2	20·9	3·32	206
Newcastle.....	207,021	38·5	31·2	20·5	2·52	188
Leicester	193,839	22·6	30·8	17·2	2·98	205
Portsmouth	174,751	40·5	27·9	17·8	2·13	174
Cardiff	155,637	25·7	34·3	18·2	2·43	179
Sunderland	137,705	48·0	35·1	21·8	3·50	191
Blackburn.....	127,615	18·3	30·6	24·3	5·62	242
Bolton	119,337	50·6	32·9	24·0	4·45	213
Preston.....	112,638	27·5	33·4	23·9	3·76	249
Derby	100,272	29·1	29·1	16·7	1·95	161
PLYMOUTH	89,096	57·9	28·7	20·2	1·90	179
Wolverhampton ...	85,780	24·3	35·4	24·4	4·23	220

Mortality at Different Seasons.

Meteorological extremes exert considerable influence upon the mortality, especially of the very young, and the aged. During the extreme heats of summer the infantile mortality rate is increased, whilst the extreme cold of winter, or early spring especially, affects the aged, and those suffering from diseases of the respiratory organs. During February and March, the weather was characterized by extreme cold throughout the country, Devonshire participating in the cold wave. The effect on the mortality of the country generally will, I am of opinion, be influenced considerably by the meteorological conditions that prevailed during the second and third months of the year. The mortality from all causes during January was 135; during February the number was 190, during March 249.

During the first quarter of 1895, 576 deaths were registered as compared with 602 for the corresponding quarter of 1894.

During the second quarter, 435 deaths were registered as against 333 for the corresponding period of 1894.

During the third quarter, 383 deaths were registered as against 298 for the corresponding quarter of 1894.

During the fourth quarter, 406 deaths were registered as against 363 for the corresponding period of 1894.

During the first quarter of the year, the high mortality rate was chiefly confined to aged persons, females suffering in much larger proportions than males, during the first quarter of 1894, the heavy mortality was amongst children, owing to the presence of an epidemic of whooping cough.

The number of deaths registered during each quarter of the year are as follows :—

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
Total deaths	576	435	383	406	1800
Male	268	214	192	196	870
Female	308	221	191	210	930
Death-rate..	25·8	19·5	17·2	18·2	20·2

The mean age at death during each quarter of the year is shewn below :—

First quarter	40	years	and	8	months
Second „	31	„		7	„
Third „	33	„		7	„
Fourth „	32	„		9	„
Whole year	35	„		2	„

Mean age at death, 1892—36 years and 8 months.

„	„	1893—32	„	9	„
„	„	1894—33	„	...	„
„	„	1895—35	„	2	„

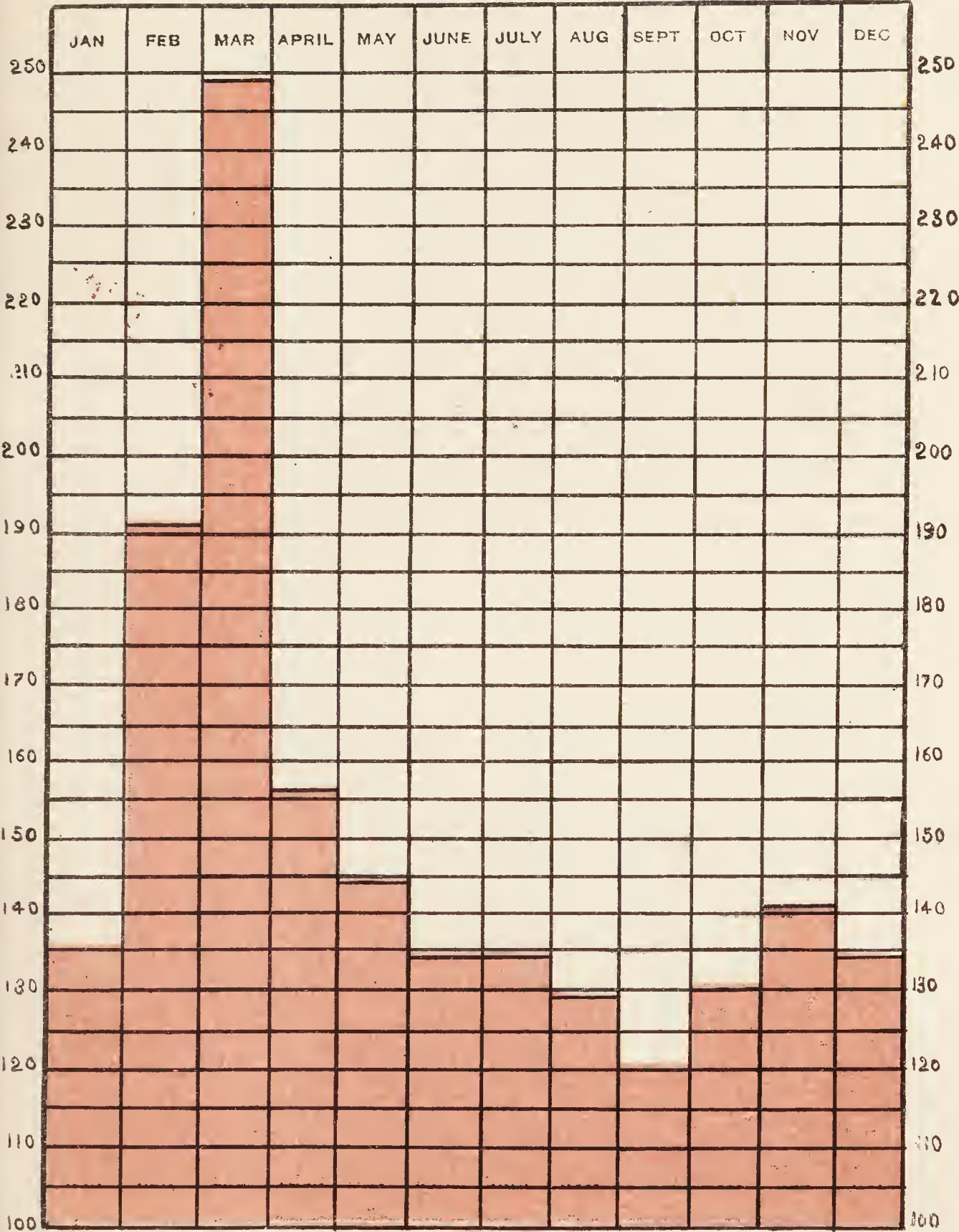
TABLE I.

Shewing the Estimated Population, Marriages, Births, and Deaths for the year, 1895, and 10 years preceding.

Year.*	Estimated Population.	Marriages.	Registered Births.	Number of Deaths.		
				All Ages.	Under 1 Year.	Principal Zymotic Diseases.
1895	89,096	909	2551	1800	456	169
1894	87,931	864	2528	1596	426	138
1893	86,781	872	2590	1860	443	236
1892	85,646	920	2483	1616	342	150
1891	84,526	899	2508	1900	452	202
1890	83,421	857	2445	1759	392	214
1889	82,330	844	2505	1982	419	454
1888	81,254	829	2454	1734	400	139
1887	80,191	859	2433	1764	479	177
1886	79,142	796	2416	1805	375	232
1885	78,108	742	2325	1700	364	181
Average of 10 years 1885-94		848	2468	1771	409	212

* For statistical purposes the Registrar-General estimates the population to the middle of the year, on the basis of the rate of increase ruling between the two preceding census periods.

CHART SHEWING MORTALITY FROM ALL CAUSES 1895.



The highest number of Deaths in one month was March, viz. :— 249.
„ lowest „ „ „ „ September, viz. :—120.

TABLE II.

Shewing the Density, Birth-rate, Death-rate, Zymotic-rate, and Infantile Death-rate for the year 1895, and 10 years preceding.

Year.	Persons to an acre.	Birth-rate.	Death-rate:	Zymotic-rate	Deaths under 1 year to 1000 Births.
1895	59·7	28·7	20·2	1·90	179
1894	58·9	28·8	18·2	1·58	168
1893	58·2	29·8	21·4	2·71	171
1892	57·4	29·0	18·8	1·75	137
1891	56·7	29·6	22·4	2·39	181
1890	55·9	29·3	21·1	2·56	160
1889	55·2	30·4	24·0	5·51	167
1888	54·5	30·2	21·3	1·71	163
1887	53·8	30·3	21·9	2 20	196
1886	53·0	30 5	22·8	2·96	155
1885	52·3	29·7	21·7	2·31	156
Average of 10 years. 1885-94		29·76	21·36	2·56	165

TABLE III.

Shewing the number of Deaths from the Principal
Zymotic Diseases for the year 1895, and 10
years preceding.

Year	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Fever	Diarrhœa	Totals
1895	..	76	3	10	29	6	45	169
1894	5	4	8	4	75	12	30	138
1893	..	83	21	10	46	12	64	236
1892	1	18	44	9	4	20	54	150
1891	..	28	17	5	68	15	69	202
1890	1	56	26	14	28	27	62	214
1889	1	16	267	44	53	16	57	454
1888	..	69	7	11	4	16	32	139
1887	..	6	15	6	50	17	83	177
1886	..	83	18	10	17	43	63	234
1885	..	20	12	10	81	17	41	181
<i>Totals</i> Average of 10 years. 1885-94.	8	383	435	123	426	195	555	2125

CHART SHEWING MORTALITY FROM
ZYMOTIC DISEASES, 1895.

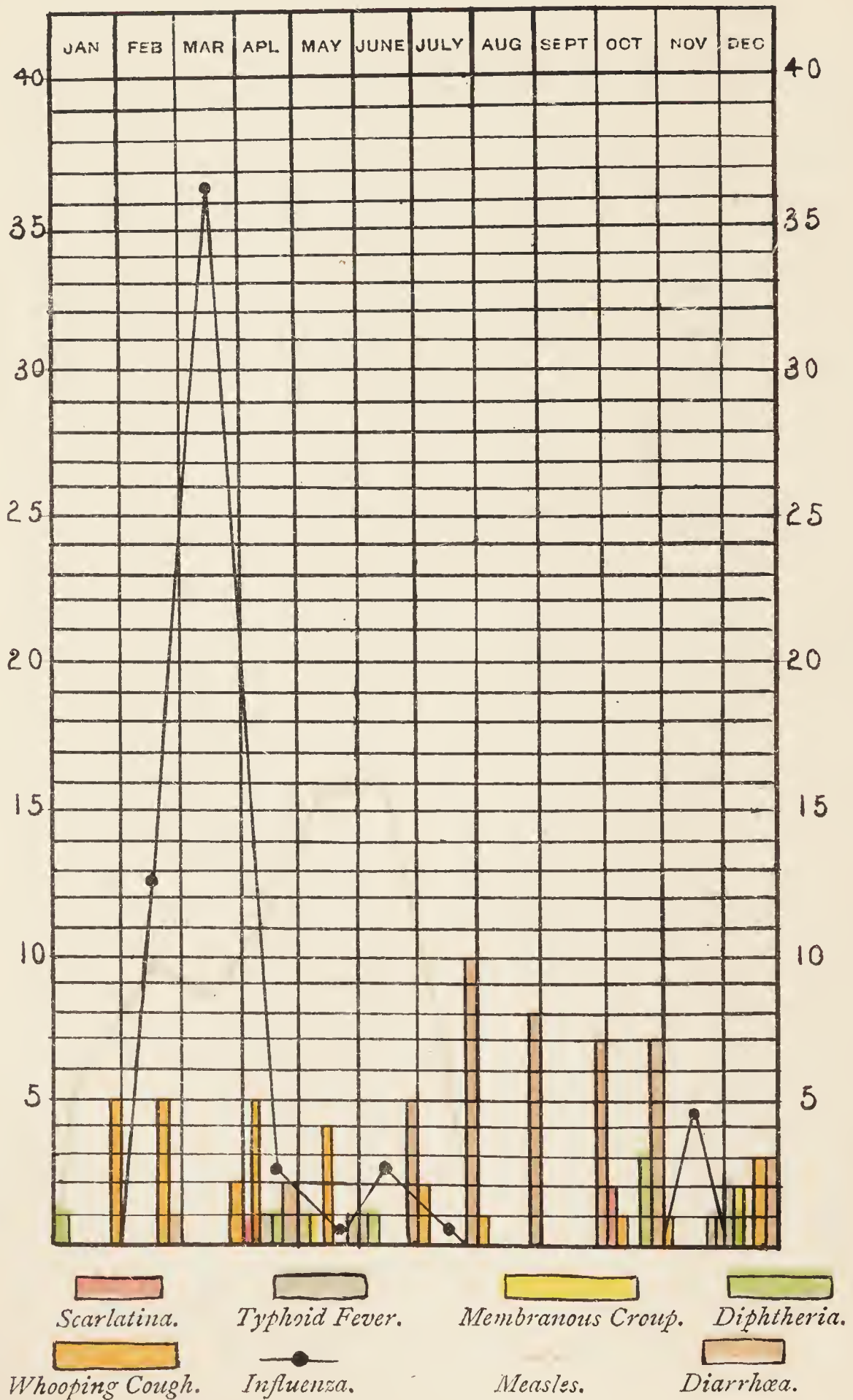


TABLE IV.

Shewing the relative Mortality Rates from the Principal
Zymotic Diseases for the year 1895, and 10 years
preceding.

Year	Smallpox	Measles	Scarlet Fever	Diph- theria	Whoop- ing Cough	Fever	Diarrhœa	Total Zymotic Rate
1895	..	0·85	0·04	0·11	0·33	0·07	0·50	1·90
1894	0·06	0·05	0·09	0·05	0·85	0·14	0·34	1·58
1893	..	0·95	0·24	0·11	0·53	0·14	0·74	2·71
1892	0·01	0·21	0·51	0·10	0·05	0·23	0·63	1·75
1891	..	0·33	0·20	0·06	0·80	0·18	0·81	2·39
1890	0·01	0·67	0·31	0·17	0·33	0·32	0·74	2·56
1889	0·01	0·19	3·24	0·53	0·64	0·19	0·70	5·51
1888	.	0·85	0·08	0·13	0·05	0·20	0·40	1·71
1887	..	0·07	0·18	0·07	0·62	0·21	1·04	2·20
1886	..	1·05	0·22	0·13	0·21	0·54	0·80	2·96
1885	..	0·26	0·15	0·13	1·03	0·22	0·52	2·31
Average of 10 years 1885-94	0·009	0·46	0·52	0·14	0·51	0·23	0·67	2·56

Localized Mortality Rates

For the Year 1895.

DISTRICT.		Persons to an Acre.	Mortality Rate per 1,000	Zymotic Rate.	Ditto 33 large Towns.
St. Andrew	...	104·0	16·7	1·82	
St. Peter	...	159·2	22·8	1·27	
St. Saviour	...	188·4	17·2	1·63	
St. James	...	66·6	14·3	1·02	
All Saints	...	178·4	18·7	1·62	
Christ Church	...	81·1	17·6	1·12	
St. Matthias	...	59·8	17·4	1·56	2·84
Holy Trinity	...	207·2	19·5	4·36	
Charles	...	65·7	20·0	1·48	
St. Jude	...	20·9	27·6	3·31	
St. John	...	23·6	22·4	2·73	
St. Luke	...	104·4	21·5	1·50	
Emmanuel	...	43·4	20·2	2·16	

I have again to record an abnormally heavy death roll in the parish of St. Jude, in fact the heaviest mortality of the 13 districts, and also a high zymotic rate. The total number of deaths registered as having occurred in the district was 209, of these 96 were children under 5 years of age, 23 of them resulting from zymotic disease, 22 from diseases of the respiratory organs, and 12 from diseases of the digestive organs.

Above the age of 5 years, 113 deaths occurred, of these only 11 were from diseases of the respiratory organs.

The population live in tenement houses, many of them newly built, designed for one family, but occupied by several and totally unfit for rack-renting.

The age distribution of the population is an important factor to be considered in the causation of a high mortality rate. The population is composed largely of the artizan class, army and navy pensioners, and people of independent means, the artizan class largely preponderate, there being a high proportionate child population.

Thus we have a population composed largely of young children and persons past middle life, the normal mortality of which is considerably above that of the average population.

In Grenville Road in which there are about 130 houses, each house occupied by two or more families, 30 deaths were registered during the year.

From an inspection of some 20 houses in the road taken promiscuously, the following facts were elicited :—that the 20 houses contained 150 rooms, that these houses were let to 59 tenants and occupied by 235 persons. As the houses are all of one class, this is a very fair average of the whole number. The rooms are small, the houses unsuited for the purpose of letting in tenements, they are now practically new, it will not be difficult to foretell the condition of this class of house in a few years time.

In Gasking Street and Higher Street there are some 39 houses during the year there occurred 19 deaths in these streets, 6 the result of zymotic disease, 8 from disease of the respiratory organs, the remainder being from constitutional disease. The houses in these streets are old, many of them dilapidated, and crowded with tenants.

The general mortality rate of Holy Trinity, the most crowded district, has again shewn a decline, but the zymotic rate is abnormally high, the highest of all districts, viz., 4·36 per 1000, whilst the general mortality rate was 19·5 per 1000, as against 20·5 per 1000 for 1894, and 25·7 per 1000 for 1893

I ascribe this decrease mainly to continued systematic inspection and the amount of administrative work carried out in the district. The deaths from zymotic disease resulted from Measles, of which there were 8 deaths, Whooping Cough which caused 2 deaths, Diarrhoea which caused 8 deaths, and Scarlatina which caused 1 death; of the 19 deaths from zymotic disease 18 were in children under 3 years of age and 1 at the age of 3 years.

The general mortality rate of St. Saviour has again resumed its normal condition, not being disturbed during the year by epidemic disease amongst its child population. Although a densely crowded district (188 per acre), its physical position, and the occupation of the greater proportion of its population, are the factors, the potentiality of which prevent a high death rate, which one would expect under usual conditions.

In the districts of St. Peter, St. Jude, St. John, and St. Luke, we have a general mortality rate varying from 27·6 per 1,000 in St. Jude, to 21·5 per 1,000, all abnormal rates. I have previously stated certain conditions which exist in the district of St. Jude that tend to high mortality rates; in St. Peter and St. Luke we have a large proportion of children in their population, which is a tenement one, we also have the factor of great density of population; in St. Peter we have another factor in the production of the high rates, the physical characteristics of a portion of the district, which is low lying on alluvial deposit, and subject to periodical floodings of storm water and sewage.

Infantile Mortality.

The mortality of infants under one year of age was in the proportion of 179 deaths to 1,000 births registered, being 10·5 per 1,000 above the rate for 1894. The total number of deaths of infants under one year was 456.

The following table gives the number of births, and of infant deaths, with the infant mortality rate, for the past ten years :—

	No. of Births.		No. of Infant Deaths.		Infant Mortality Rate per 1,000 Births.	
1886	...	2,416	...	375	..	155
1887	...	2,433	...	479	...	196
1888	...	2,454	...	400	...	163
1889	...	2,505	...	419	...	167
1890	...	2,445	...	392	...	160
1891	...	2,508	...	452	...	181
1892	...	2,483	...	342	...	137
1893	...	2,590	...	443	...	171
1894	...	2,528	...	426	...	168
1895	...	2,551	...	456	...	179

I have appended a table giving the causes of the 456 deaths of infants that occurred during the past three years, from which it will be at once seen that the diseases responsible for the heaviest mortality are those of the respiratory and digestive organs.

**Infant Mortality in Plymouth in 1893, 1894, and 1895
from different Diseases.**

	1893.	1894.	1895.
Measles	18	1	17
Whooping Cough	23	32	14
Diarrhœa	48	28	38
Tabes Mesenterica	11	12	21
Premature Births	32	54	50
Convulsions	25	35	28
Bronchitis	57	63	65
Pneumonia	24	20	16
Diseases of Stomach	19	11	2
Enteritis	33	18	34
Debility, Atrophy, Inanition	31	29	30
Other causes	122	123	141
	<hr/>	<hr/>	<hr/>
Total	443	426	456
	<hr/>	<hr/>	<hr/>

Illegitimacy, 1895.

During the past year 87 births of illegitimate children have been recorded, being 3·4 per cent of the whole. The number of deaths of illegitimate children under one year was 31, equal to a rate of 356·3 per 1,000 births, the rate for legitimate children being equal to 172·5 per 1,000 births.

Certification of Causes of Death.—Of the 1800 deaths registered, 1688 or 93·8 per cent. were duly certified by registered medical practitioners, and 107 or 5·9 per cent. by coroners after inquest, whilst the remaining 5 or 0·2 per cent. were not certified.

Of the 1,800 deaths that occurred in the Borough during the year, 5 only were uncertified. This decrease in the number of uncertified deaths is gratifying to note. During the year 1894, 16 deaths were uncertified either by Coroner or Medical Practitioner ; in this respect we compare most favourably with other

large towns, and with the country generally. The number of uncertified deaths registered in England and Wales during 1895 was 13,222, equal to a per centage of 2·3 as against 0·2 per cent. in the Borough.

Any system of registration that permits of upwards of 13,000 uncertified deaths being registered during one year, is obviously faulty and dangerous, leaving a loop hole for the escape of the criminal, especially in a country in which the pernicious system of infantile insurance prevails. The most potent and only logical argument used against the practice of cremation is the destruction of all traces of the crime in certain cases of homicide, as long as the present system of death registration obtains, this argument loses force. Under the system adopted by the Cremation Society it is impossible to register any uncertified death, a system that should be, in the interest of humanity, adopted by the legislature.

It is evident from a perusal of the first and second reports of the Select Committee appointed to inquire into the sufficiency of the existing law in regard to death certification and disposal of the dead, that there is a concensus of opinion that the present system is faulty and that the law requires amendment. It is also evident that the present system of Coroners' inquiries into the cause of death is by no means satisfactory—especially when of 55 Inquests held in one town during a year, to inquire into the cause of death from disease, in thirteen cases only was the disease that caused death stated.* Further, when the present system permits of such verdicts as to the cause of death being returned as given below, it is obvious that speedy alteration of the law is necessary :—

VERDICT.--Man died of stone in the kidney, which stone he swallowed when lying on a gravel path in a state of drunkenness !!

VERDICT.—Child, three months old, found dead, but no evidence whether born alive.

* *Report of Evidence before Select Committee*, p. 37. Dr. OGLE.

The Borough Coroner has during the year made inquiry into the cause of 107 deaths, the causes of which as certified by him are as follows :—

Violent Deaths—Accident or Negligence :—

Burns and Scalds ...	...	...	6
Drowning ...	...	...	7
Suffocation ...	...	.	2
Other Injuries ...	...	...	11

Violence other than Accidental :—

Homicide ...	...	...	1
Suicide ...	...	...	8
Natural Causes ...	...	...	72

107

MORTALITY TABLES.—Deaths in the County Borough of Plymouth, for 12 months ending 31st December, 1895.

CAUSES OF DEATH.	All ages	Under 1 Year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and up- wards		TOTAL F.
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
ALL CAUSES ...	1800	256	200	122	105	27	25	31	35	38	56	53	46	60	72	80	114	116	125	88	151	1800
I.—SPECIFIC FEBRILE or ZYMOTIC DIS- EASES ...	254	47	37	50	41	4	4	2	2	4	6	2	5	4	3	5	7	7	11	2	11	254
II.—PARASITIC DISEASES ...	2	...	2	..	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
III.—DIETETIC DISEASES ...	4	...	...	1	...	...	...	...	...	1	...	..	...	...	...	...	2	...	...	...	...	4
IV.—CONSTITUTIONAL DISEASES ...	319	20	20	13	18	8	10	12	19	18	25	14	17	12	25	16	28	14	22	2	6	319
V.—DEVELOPMENTAL DISEASES ...	210	42	26	...	...	...	...	...	...	...	...	...	...	...	...	1	2	12	11	42	74	210
VI.—LOCAL DISEASES ...	921	122	94	51	42	10	11	14	14	12	24	35	24	39	42	54	75	80	78	40	60	921
VII.—DEATHS FROM VIOLENCE ...	35	...	3	5	2	4	...	3	...	3	1	2	...	4	2	2	..	1	1	2	...	35
VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES ..	55	25	18	2	2	1	...	...	...	...	...	...	...	1	...	2	...	2	2	...	...	55

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1895.

CAUSES OF DEATH.		All ages	Under 1 year.	1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.	TOTAL.		
				M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F				
I.																							
1.—Miasmatic Diseases		...	19	15	46	40	4	3	1	4	2	2	3	4	1	4	7	7	10	2	11	187	
2.—Diarrhoeal		...	26	15	3	1	...	...	...	...	...	...	1	...	2	...	...	...	1	...	...	50
3.—Malarial		
4.—Zoogenous		
5.—Venereal		...	2	5	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...
6.—Septic		2	...	...	...	...	...	3	...	...	...	...	...	1	...	...	...	...	...	6	
II.																							
Parasatic Diseases	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	
III.																							
Dietetic Diseases	4	...	1	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	4	
IV.																							
Constitutional Diseases		...	20	20	13	18	8	10	12	19	18	25	14	17	12	25	16	28	14	22	2	6	319
V.																							
Developmental Diseases		...	42	26	1	2	12	11	42	74	210

MORTALITY TABLES. Deaths in the County Borough of Plymouth, for 12 months ending 31st December, 1895.

CAUSES OF DEATH.		All ages		Under 1 Year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards		TOTAL		
		M		F		M		F		M		F		M		F		M		F		M			F	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F
VI.																										
1.—	Diseases of Nervous System	19	19	13	7	3	1	2	2	3	4	8	4	9	11	14	15	22	17	8	21	...	...	202
2.—	Organs of Special Sense	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3.—	Circulatory System	7	..	2	1	3	4	1	4	2	6	8	4	10	12	13	28	23	31	12	8	...	...	179
4.—	Respiratory System	52	40	31	30	2	4	5	2	4	4	6	5	11	10	18	27	22	24	15	25	...	...	337
5.—	Digestive System	43	35	3	4	1	1	1	4	1	3	7	4	3	4	5	4	8	6	1	5	...	...	143
6.—	Lymphatic System and Ductless Glands	...	...	...	...	1	...	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	4
7.—	Urinary System	...	..	1	...	...	...	3	1	2	...	6	3	3	4	4	1	5	...	4	1	...	...	38
8.—	Reproductive System	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
	(a) Organs of Generation	...	...	...	...	...	...	...	...	...	7	...	3	...	1	...	...	...	...	...	...	...	...	4
	(b) Diseases of Parturition	...	...	..	...	..	...	..	...	..	...	...	1	...	...	...	...	...	...	...	...	...	...	8
9.—	Organs of Locomotion	...	...	1	...	...	1	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
10.—	Integumentary System	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
VII.																										
1.—	Accident, or Negligence	...	2	5	2	4	...	3	...	3	1	1	...	3	1	...	...	..	...	1	...	...	...	26
2.—	Homicide	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
3.—	Suicide	...	...	...	...	...	...	...	...	...	...	1	...	1	1	2	...	1	1	1	...	...	...	8
4.—	Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
VIII.																										
Ill-defined and not Specified Causes		25	18	2	2	1	...	...	...	...	...	...	...	1	...	2	..	2	2	...	...	...	...	55

MORTALITY TABLES.—Deaths in the County Borough of Plymouth, for 12 months ending 31st December, 1895.

CAUSES OF DEATH.	TOTAL.																					
	All Ages.		Under 1 year.		1 and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Constitutional Diseases.																						
Rheumatic Fever ...	8	...	...	...	1	3	1	...	...	...	...	1	...	1	...	...	...	...	...	...	...	8
Rheumatism ...	8	...	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	1	2	...	1	8
Gout ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rickets ...	3	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cancer ...	78	...	...	...	...	...	...	...	...	...	3	1	7	3	9	8	19	6	16	1	5	78
Tabes Mesenterica...	25	11	10	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
Tubercular Meningitis (Acute Hydrocephalus)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis ...	10	2	3	2	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
Other forms of Tuberculosis, Scrofula	135	1	...	3	5	1	3	7	17	16	21	11	10	7	14	6	5	5	3	...	...	135
Purpura, Hæmorrhagic Diathesis	40	5	7	5	7	6	2	4	1	1	...	1	...	1	...	...	...	...	...	...	...	40
Anæmia, Chlorosis, Leucocythæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diabetes ...	9	...	...	1	...	...	...	1	...	...	1	...	...	...	2	...	2	...	1	...	...	9
Other and undefined Constitutional Diseases	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Developmental Diseases.																						
Premature Births ...	50	30	20	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50
Cyanosis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Spina Bifida ...	4	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Other Congenital Diseases	14	10	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
Old Age ...	142	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	12	11	42	74	142

DISEASES OF ORGANS OF SPECIAL SENSE.

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1895.

CAUSES OF DEATH.		TOTAL.																		
All ages	Under 1 year.	I and under 5		5 and under 15		15 and under 25		25 and under 35		35 and under 45		45 and under 55		55 and under 65		65 and under 75		75 and upwards.		TOTAL.
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F			
DISEASES OF CIRCULATORY SYSTEM.																				
Endocarditis, Valvular Disease	1	2	...	...	...	...	...	...	1	1	2	4	4	4	2	...	22
Pericarditis	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2
Hypertrophy of Heart
Angina Pectoris	1	...	...	...	...	...	2	...	...	...	4
Syncope	1	...	...	3	2	3	...	18
Aneurism	1	...	...	...	...	...	...	...	2
Senile Gangrene	1	...	1	1	1	...	6
Embolism, Thrombosis	1	...	...	...	2
Other and undefined Diseases of Heart or Circulatory System	...	4	...	1	1	2	1	4	1	5	3	8	10	10	18	13	23	6	7	123
DISEASES OF RESPIRATORY SYSTEM.																				
Laryngitis	...	2	1	1	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	7
Croup	4
Other Diseases of Larynx and Trachea	1
Emphysema, Asthma	10
Bronchitis	...	39	26	18	15	2	1	...	...	...	...	...	...	3	5	13	20	11	20	210
Pneumonia	...	8	8	9	7	...	2	4	1	3	4	7	2	3	9	5	3	2	4	86
Pleurisy	1	2	...	1	1	...	2	...	1	...	1	10	10
Other and undefined Diseases of Respiratory System	...	3	5	1	2	...	...	...	...	...	...	1	1	...	...	2	...	2	...	18

MORTALITY TABLES.—Deaths in the County Borough of Plymouth for 12 months ending 31st December, 1895.

CAUSES OF DEATH.	DISEASES OF DIGESTIVE SYSTEM.																				
	All ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 55	55 and under 65	65 and under 75	75 and upwards.	TOTAL.									
	M	F	M	F	M	F	M	F	M	F	M	F									
Stomatitis	1	1	...	...	...	...	...	...	...	...	...	1
Dentition	11	7	1	...	3	...	...	...	...	...	...	11			
Dyspepsia	1	...	...	...	...	...	...	...	1	...	...	1
Hæmatemesis	1	...	...	...	...	1	...	...	...	...	...	1
Diseases of Stomach	15	1	1	...	...	...	2	2	1	...	...	15				
Enteritis	39	20	14	...	...	1	...	...	...	2	1	39				
Ulceration of Intestine	1	...	...	...	...	...	...	1	...	...	...	1
Ileus, Obstruction of Intestine	3	...	...	...	...	...	...	1	...	...	...	3
Stricture or Strangulation of Intestine	1	...	...	...	...	1	...	...	...	...	...	1
Intussusception of Intestine	2	2	...	...	...	...	...	...	...	...	...	2
Hernia	2	...	...	...	...	...	...	...	1	...	...	2
Fistula	...	...	...	...	...	...	...	...	...	...	...	...
Peritonitis	...	...	...	...	...	...	...	...	...	...	...	...
Ascites	5	...	...	1	...	...	...	1	...	...	...	5	
Gallstones	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis of Liver	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Liver	11	...	...	...	1	2	2	...	3	1	...	11						
Other and undefined Diseases of Digestive System	10	...	...	...	2	...	2	1	...	3	1	10						
	40	12	19	3	1	...	1	...	...	1	...	40							

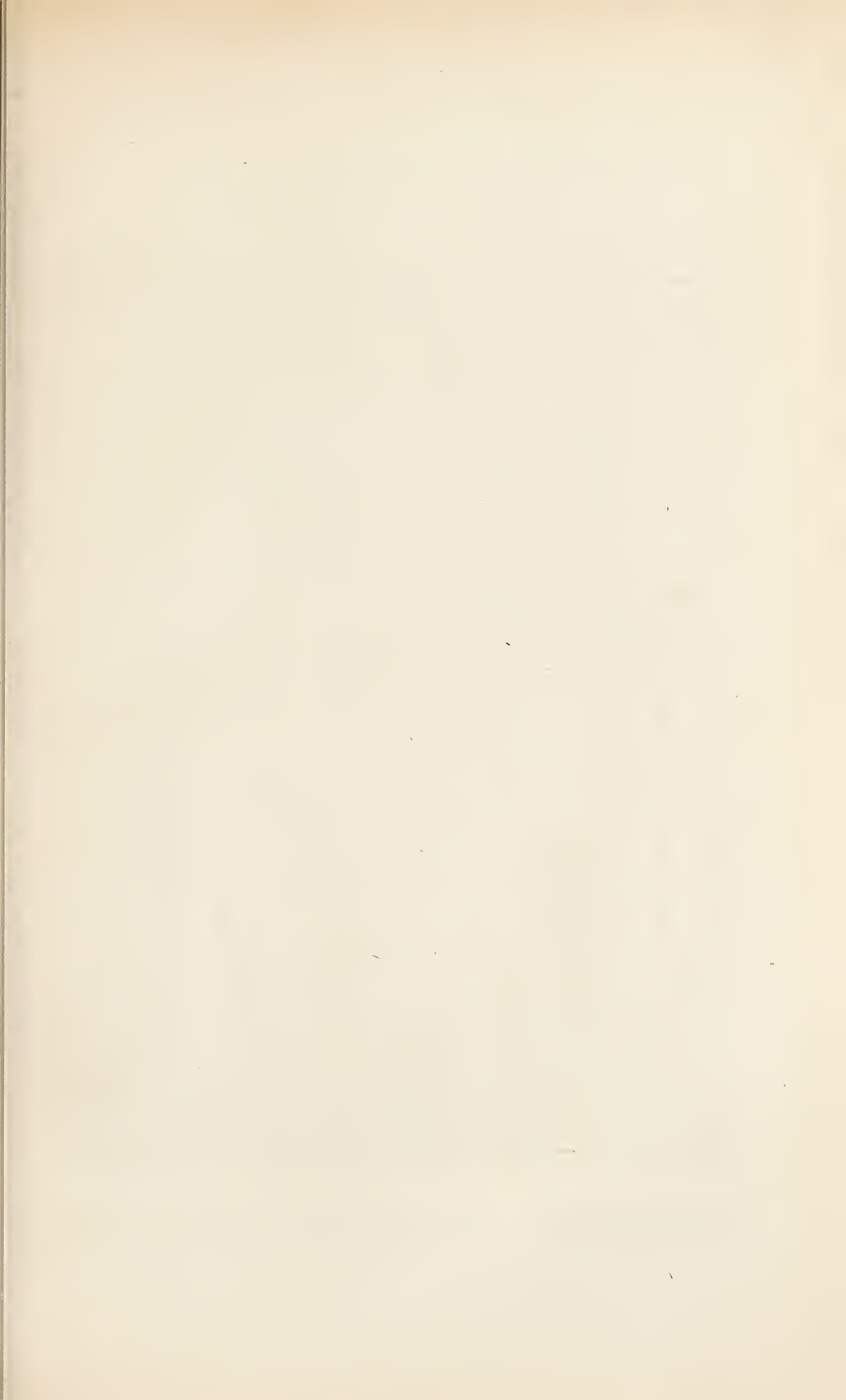
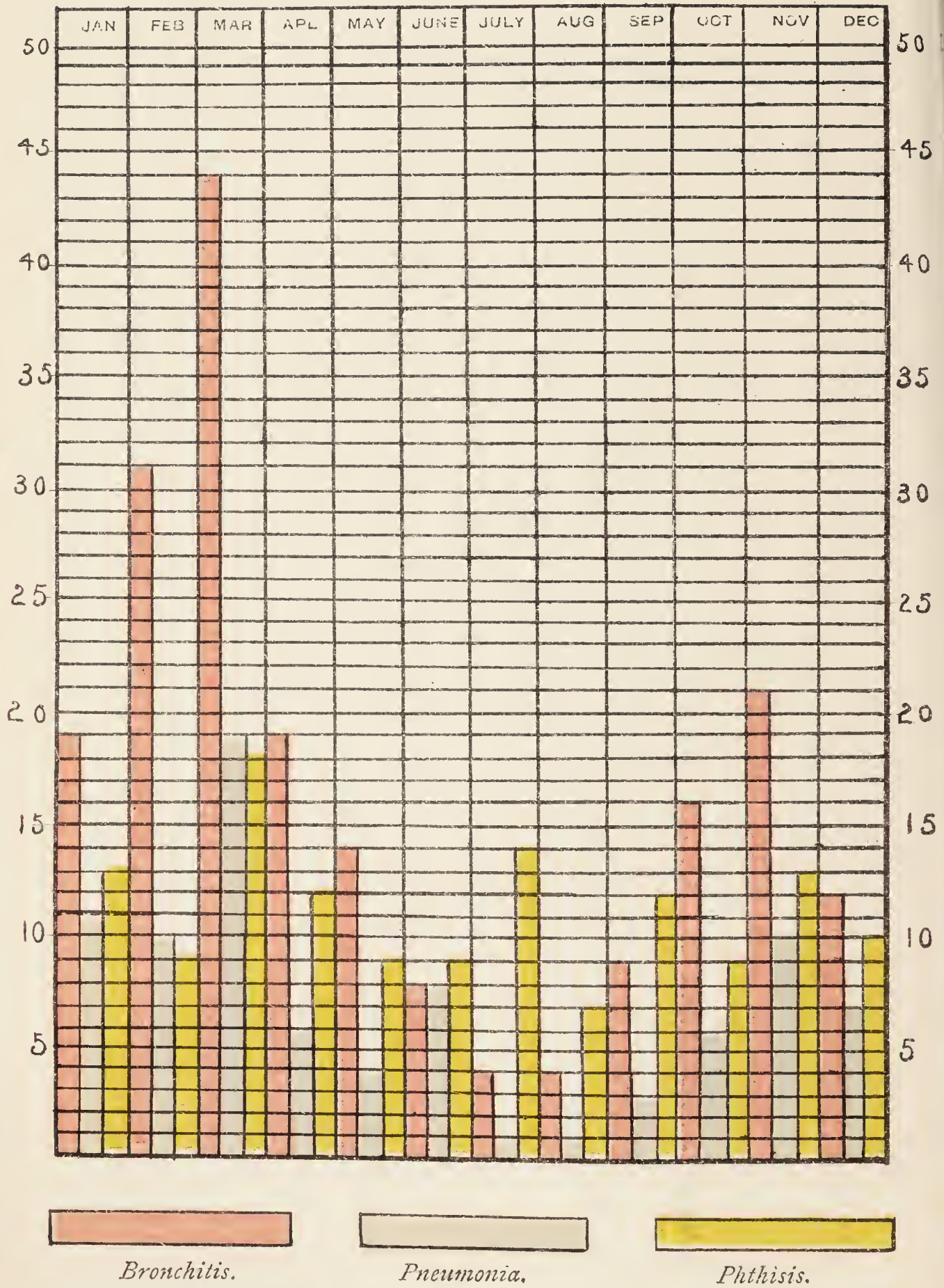


CHART SHEWING MORTALITY FROM
RESPIRATORY DISEASES, 1895.



[illegible]



Prevalence of Disease, 1895.

The number of deaths registered from all causes during the year was 1,800, of these 169 were attributed to the following seven principal zymotic diseases :—

Smallpox	-	-	0
Measles	-	-	76
Scarlet Fever		-	3
Diphtheria	-	-	10
Whooping Cough	-	-	29
Fever	-	-	6
Diarrhœa	-	-	45
			<hr style="width: 50%; margin-left: auto; margin-right: 0;"/>
			169

From diseases of the zymotic class not notifiable there have been registered 168 deaths as against 115 in the preceding year. From Measles, 76 ; Whooping Cough, 29 ; and Influenza, 63.

The two zymotic diseases most fatal to child life in this county are Measles and Whooping Cough, neither of which are notifiable in the Borough, the question has from time to time been discussed by your Committee and correspondence has passed between the Medical Officer of the Local Government Board and this Authority on the subject, up to the present no definite action has been taken. I am aware that a considerable difference of opinion exists amongst health officers and sanitary authorities as to the desirability of adding these two diseases to those generally notified, the principal argument used against notification is the greatly increased hospital accommodation required to be of real service, and the increase of administrative machinery involved. I am of opinion that with the present hospital accommodation much may be done ; surely some effort should be made to lessen an annual average mortality of 20,000 from these two diseases. It cannot be a matter of congratulation to those engaged in the work of

preventive medicine, that the ravages of Measles and Whooping Cough, should proceed unchecked. Were these Diseases notifiable, although there should be insufficient hospital accommodation to deal with the large number of cases during periods of epidemic, much might be done by early notification. As the Public Elementary Schools are the most potent *foci* for the distribution of these diseases, much could be done by the co-operation of School Board officials and Sanitary Authorities. As each case of zymotic disease is notified, an inspection, of the sanitary condition of the house and premises occupied by patient is made, written instructions as to precautions to be taken to prevent extension, are furnished to those in charge of the case, disinfectants are supplied, and a careful inquiry is made as to all possible sources of infection. The patient is strongly advised to seek isolation and treatment in the Borough Hospital. In addition, the following officials are notified of the existence of the illness: Clerk to School Board, Public Librarian, and Sunday-school Superintendents. When necessary the employer of patient or his family are notified. As it has come to my knowledge that occasionally linen and bedding have been sent to public laundries without previous efficient disinfection, to the danger of the public; in future the managers of laundries will also be notified of the existence of all cases of infectious disease notified.

It is gratifying to note that year by year the increasing percentage of cases of infectious disease, excluding erysipelas treated in the isolation hospital. I have excluded erysipelas, as the majority of cases reported are so slight that no especial treatment or isolation is required to prevent extension, nor is it necessary to adopt the same precautions as in other cases of infectious disease.

There are two other preventable diseases which at present are not dealt with by the Legislature or Sanitary Authorities. The first I refer to is Tuberculosis, much might be done to lessen the mortality from this disease which claims so many

victims each year. I am aware much is being done by authorities in improving the general sanitation of towns : in reducing over-crowding, by the erection of better dwellings for the artisan class, by education in the elementary rules of personal and household hygiene ; at the same time more might be done by wise legislation. I especially refer to the periodical examination of all dairy cattle by thoroughly qualified veterinary surgeons, as is the custom in certain of the American States, also the examination of every animal before slaughtering.

The other disease I refer to, although not coming under the cognizance of the Sanitary Authorities, is causing an ever-increasing amount of suffering and physical deterioration amongst our population. I refer to Syphilis, a disease more far-reaching in its effects than any of the zymotic diseases, and becoming more prevalent each year. The serious increase of Syphilis among our population, civil and military, since the unwise and ill-advised repeal of the C. D. Acts, is assuming alarming proportions, it behoves those public bodies to whose administration is entrusted the public health, to bring this matter to the notice of the government, urging them to adopt legislative measures enabling them to deal with both Tuberculosis and Syphilis.

Measles.—During the first half of the year measles was epidemic in the Eastern portion of the Borough and characterized by a heavy mortality, especially during the months of April, May, and June—in August the epidemic rapidly declined—no deaths being registered since July. The total mortality being 76, of these 73 were children under 5 years of age ; the number of deaths recorded in 1894, were 4 only.

Whooping Cough.—This disease is now endemic in our large centres of population, periodically assuming epidemic character and causing a heavy mortality each year. During 1895 there were only 2 months (June and September), in which deaths resulting from this disease were not registered, the death toll for the year being 29, all in children under 5 years of age.

Influenza.—Again I have to record a heavy mortality from this disease which caused 63 deaths as against 36 the previous year, the heaviest incidence of the disease being during February and March, which months were characterized by very inclement weather, during this period 50 deaths were registered from Influenza, during the remaining months of the year 13 deaths were registered from the same cause. During the past five years 280 deaths have resulted from attacks of influenza.

Scarlatina.—73 cases have been reported during the year, three only of which proved fatal, two of the fatal cases being in children under 5 years of age. The mortality rate being 4·1 per cent. as against 4·4 per cent. for 1894.

The number of cases recorded during the past year is the lowest since the adoption of the compulsory notification in 1889, the decrease is most marked during the past four years.

Number of cases reported :—

1892.	1893.	1894.	1895.
1264.	469.	112.	73.

Enteric Fever.—I have again to report a decrease in the number of cases reported and a corresponding decrease in the mortality, this decrease has been steady for the past four years, in 1890, 178 cases occurred during the year; in 1895, 28 cases were reported, of which 4 were imported from other districts, leaving 24 as originating within the Borough, of the total number of cases six terminated fatally.

In ten houses occupied by typhoid patients defective sanitary conditions existed, the worst being leaky house drains and traps, admitting sewer air into the dwellings.

Small Pox.—Only one outbreak has occurred during the year, the case was notified early and at once isolated on board the Hospital Ship “Maud,” all precautions were taken at the home of the patient, no extension occurred, the patient after the usual detention being discharged well.

Vaccination.—During the year 1895, the births of 2,551 children were registered ; during the same period 1,526 children were successfully vaccinated ; this will give a gross percentage of 59·8 of vaccinations to births registered, but as there were children born in 1894 vaccinated during 1895, and children born in 1895 who will not be vaccinated until the present year, it will at once be seen that the percentage is only an approximate one. Deductions must also be made for deaths of infants during the year, vaccinated and unvaccinated, whose births were registered during the same period.

From the above it will be seen that deducting the deaths of unvaccinated infants we have approximately some 30 per cent. of children who escape vaccination, and so remain unprotected. The percentage of unprotected children is increasing yearly throughout the country, according to the report of the Medical Officer of the Local Government Board for 1893-94. In the Metropolis in 1872 the percentage of children unvaccinated or not accounted for was 8·8, while in the provinces the percentage was 4·5, while in 1891 the percentage was for London 16·4, and the provinces 12·9 per cent.

In May, 1889, the Royal Commission to inquire into the subject of vaccination was appointed, now nearly seven years since, their report is not yet issued, the delay has no doubt considerably influenced the public mind, in their opinion as to the merits or demerits of vaccination, this feeling has made itself felt in the action of Boards of Guardians throughout the country, who, in numerous instances have refrained from setting the law in motion compelling defaulters to have their children vaccinated.

I have reason to believe that a considerable percentage of the children vaccinated are inefficiently vaccinated and thus inefficiently protected. It is natural that when mothers become aware that it is the practice of any particular medical practitioner to vaccinate so as to produce one vesicle only

instead of four (as prescribed by the Local Government Board regulations), that they should take their infants to the one vesicle practitioner rather than to the official vaccinators or to "four vesicle practitioners." This practice of inefficient vaccination must eventually do much to carry conviction to the minds of many that vaccination does not render the subject immune against attacks of small pox ; as the general public cannot be expected to discriminate between efficient or inefficient vaccination. If the present rate of decrease in the percentage of unprotected children throughout the country continues, the coming generation will probably experience the horrors of epidemic small pox.

Diphtheria and Membranous Croup.—During the year 33 cases of diphtheria have been reported, and 6 cases of membranous croup, as against 54 cases of diphtheria and 3 cases of membranous croup for the year 1894.

Seven cases of diphtheria were removed to the hospital for treatment, and two cases of membranous croup. Two cases terminated fatally ; of the remaining 30 cases nursed at home, 9 proved fatal. Defective sanitary conditions were discovered in the houses of patients in 15 instances, these were remedied. It is to be regretted that in every case of reported diphtheria, a bacteriological examination of the secretions from throat cannot be made before the diagnosis is pronounced, at present there are no doubt many cases described as diphtheria that are not such, while there are others that are treated as being simple cases of throat trouble which are diphtheria.

Puerperal Fever.—There has been a considerable increase in cases described as puerperal fever, during the past year eleven cases have been reported, three of which terminated fatally. In five of the houses from which cases of puerperal fever were reported, defective sanitary conditions were found to exist. The midwife or nurse in each instance was warned by letter to abstain from attending other cases, her clothing is

disinfected, and instructions are given her as to personal disinfection.

Diarrhœa.—Forty-five deaths were registered as resulting from diarrhœa during the year, of these 38 were children under one year of age. The deaths occurred principally in the third quarter of the year and were zymotic in character.

Borough Hospital.—During the year eighty-three new cases have been treated in the Isolation Hospital, Mount Gould, five remaining under treatment from the previous year, five cases terminated fatally. There has been no case of infectious sickness amongst the staff during the year.

The detailed list of cases treated will be found in the tables appended to this report.

Hospital Ship “Maud.”—One case only of small pox has been admitted for treatment during the year, that being of mild character.

PLYMOUTH SANITARY AUTHORITY'S HOSPITALS.

TABLE OF TOTAL CASES TREATED DURING 1895.

MOUNT GOULD HOSPITAL.

	Small Pox.		Scarlet Fever.		Diphtheria.		Membranous Group.		Typhoid Fever.		Erysipelas.		Measles.		Observation.		TOTAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Remaining from last year	1	3	...	...	...	...	1	...	...	...	...	...	...	...	5 } 88
Admitted	12	22	1	6	2	..	8	2	1	2	12	13	...	2	
Discharged	10	24	1	5	...	...	9	...	1	2	11	13	...	2	78 } 88
Died	1	1	...	...	2	...	...	1	...	...	..
Remaining in Hospital..	3	1	...	...	1	...	...	...	...	...	...	...	...	...	5 } 88
Mortality, per cent.	14 ² ₇	...	50	...	18 ² ₁₁	...	...	...	4	...	...	...

* Three of the 88 cases admitted were from other Sanitary Districts, viz. :—

- 1 case Scarlet Fever from Compton Gifford.
- 1 " " " s.s. Ganges.
- 1 " Typhoid Fever from s.s. Ophir.

MORTALITY PER CENT.

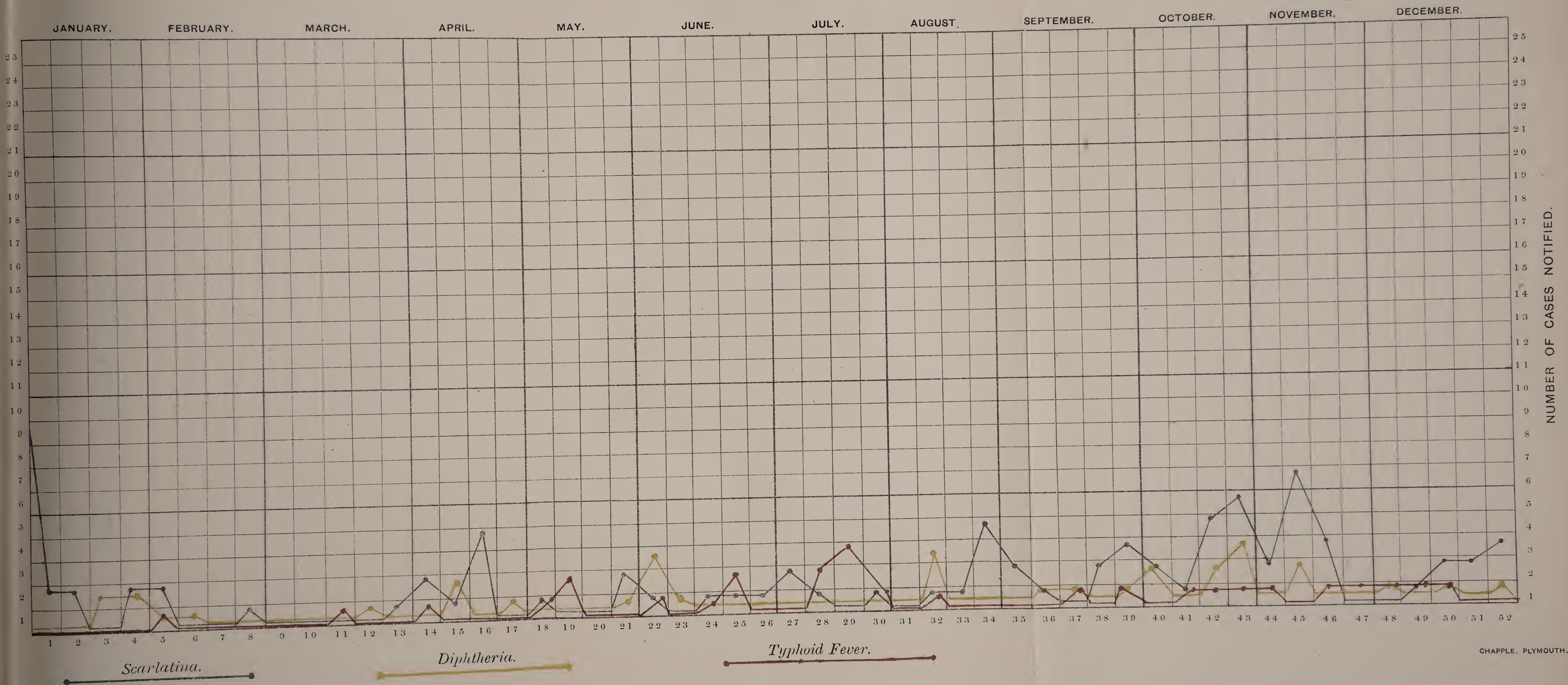
Cases treated in Hospital	...	...	14 ² ₇	50	18 ² ₁₁	...	4	...	...	5 ¹⁵ ₂₂
Cases nursed at home...	...	79	...	50	...	...	...	...	...	5 ¹²

INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

Table shewing the number of cases of Infectious Diseases notified each month during the year 1895.

NOTIFIABLE DISEASES.	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTALS.
Small-pox ...	...	...	...	...	1	...	...	...	...	...	...	...	1
Scarlatina, or Scarlet Fever	7	2	1	7	4	3	4	8	7	13	9	8	73
Diphtheria ...	5	1	1	3	4	1	...	3	4	6	3	2	33
Membranous Croup	...	1	...	...	2	...	...	...	...	...	...	3	6
Typhus Fever...	...	...	...	...	...	...	...	...	...	...	...	...	0
Typhoid, or Enteric Fever	1	...	1	1	4	3	6	1	2	4	3	2	28
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	0
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	0
Puerperal Fever...	...	...	1	2	...	...	3	2	1	1	1	...	11
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	0
Erysipelas	5	8	14	9	8	5	9	8	10	7	9	16	108
Totals in each month	18	12	18	22	23	12	22	22	24	31	25	31	260

CHART SHEWING NUMBER OF CASES OF SCARLATINA, TYPHOID FEVER, AND DIPHTHERIA, NOTIFIED EACH WEEK
FOR THE YEAR ENDING DECEMBER 31ST, 1895.



THE INFECTIOUS DISEASE (NOTIFICATION) ACT, 1889.

Table shewing the number of Notifications received in the seven years, 1889-1895.

NOTIFIABLE DISEASE.	1889*	1890	1891	1892	1893	1894	1895	TOTALS.
Small-pox	...	9	3	38	1	27	1	79
Scarlatina, or Scarlet Fever	...	352	239	1264	469	182	73	3049
Diphtheria	...	65	56	52	60	54	33	362
Membranous Croup	...	9	12	6	10	3	6	51
Typhus Fever
Enteric, or Typhoid Fever	...	178	51	93	56	38	28	458
Continued Fever	...	2	4	7	...	...	...	13
Relapsing Fever
Puerperal Fever	...	4	3	6	6	4	11	36
Cholera (English)	1	...	...	1
Erysipelas	...	83	101	138	174	137	108	761
Total	553	702	469	1604	777	445	260	4810

* The compulsory notification of Infectious Disease came into operation in the Borough on the 12th November, 1889.

Monthly Table of Deaths from All Causes and Zymotic Diseases, with the rates
per 1,000 per annum.

MONTH.	No. of Deaths from All Causes.	Annual Rate per 1,000 living.	No. of Deaths from Zymotic Diseases	Annual Rate per 1,000 living.	Deaths of	
					Infants under 1 year of age	Persons aged 60 and upwards.
January	135	18.18	12	1.61	25	46
February	192	25.85	16	2.15	34	81
March	249	33.53	11	1.48	48	103
April	157	21.14	22	2.96	41	47
May	144	19.39	23	3.09	39	41
June	134	18.04	23	3.09	27	39
July	134	18.04	19	2.55	40	41
August	129	17.37	9	1.21	42	30
September	120	16.16	7	0.94	45	30
October	130	17.50	13	1.75	47	34
November	142	19.12	3	0.44	38	44
December	134	18.04	11	1.48	30	44
Year ...	1800	20.20	169	1.90	456	580

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox.	Scarlet Fever.	Diphtheria	Membranous Croup.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	TOTALS.
19 Albert Road	I	..	..	..	..	..	..	..	I
8 Alexandra Road	I	I
14 Alma Cottages	I	I
12 " Street	I	I
6 Anson Place, S.	I	..	..	..	..	..	I
19 Anstis Street	I
20 " " Terrace	..	I	..	..	..	..	..	..	..	..	..	I
17 Armada Terrace	I	..	..	I
18 " " Ashley Place	..	I	..	..	..	..	..	..	..	..	..	I
4 Ashley Place	..	2	..	..	..	..	..	..	..	..	..	2
9 " "	I	..	..	..	..	..	I
15 " " Terrace	I	I
6 " "	I	..	..	..	..	..	..	..	I
41 Baring Street	..	I	..	..	..	..	..	..	..	..	..	I
10 Bath Street	I	I
15 Beatrice Avenue, W.	I	I
16 " " "	..	I	..	..	..	..	..	..	..	..	..	I
7 Bedford Park	..	I	..	..	..	..	..	..	..	..	..	I
26 " " Street	..	I	..	..	..	..	..	..	..	..	..	I

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox.	Scarlet Fever	Diphtheria.	Membranous Group.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	TOTALS.
25 Belgrave Road	1
2 " Terrace	1	..	..	..	..	..	..	..	1
25 Belmont Street	1
8 Bishop's Place	1	..	..	1
9 Brunswick Road	1	..	..	..	..	..	1
10 " "	..	1	..	..	..	..	..	..	..	..	..	1
6 Buckwell Street	1	1
11 " "	..	1	..	..	..	..	..	..	..	..	..	1
Camden Street Mission Hall	1	..	..	..	..	..	..	..	..	1
19 Capra Terrace	1	1
2 Castle Street	1	..	..	1
7 " "	..	1	..	..	..	..	..	..	..	..	..	1
10 " "	1	1
Catherine Street, Synagogue House	..	1	..	..	..	..	..	..	..	..	..	1
Cattedown	1	1
32 Cecil Street	1	..	..	1
12 Chaddlewood Avenue, E.	1	1
3 " " W.	1	..	..	..	..	..	1
18 " " W.	1	1

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
21 Chaddlewood Avenue, W.	-	1	1
25 Chedworth Street	-	1	1
35 Clare Buildings	-	1	..	..	..	..	..	1
44 " "	-	1
79 " "	-	1	1
23 Claremont Street	-	1	..	..	1
3 Clarence Street	-	1
42 " "	-	1
7 Clifton Street	-	..	1	..	..	..	..	..	..	..	..	1
17 Commercial Road	-	1	1
6 " Street	-	1	..	..	1
5 Constantine Street	-	1
3 " Road, S.	-	1	..	..	..	..	..	..	..	..	..	1
22 " Road, S.	-	1	1
40 " Road	-	1	..	..	..	..	..	1
12 Densham Terrace	-	1	1
7 Edgcumbe Place	-	1	..	..	..	..	..	..	..	..	..	1
2 Edith Avenue	-	1	..	..	..	..	..	..	..	..	..	1

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
2 Endsleigh Cottages	·	·	·	·	·	·	·	·	·	·	·	1
5 " Place	·	·	·	·	·	·	·	·	·	·	·	1
37 Exeter Street	·	1	·	·	·	·	·	·	·	·	·	1
40 " "	·	·	·	·	·	·	·	·	·	·	·	1
41 " "	·	1	·	·	·	·	·	·	·	·	·	1
79 " "	·	·	·	·	·	·	·	·	·	·	·	1
103 " "	·	·	·	·	·	·	·	·	·	·	·	1
28 Flora Street	·	·	1	·	·	·	·	·	·	·	·	1
39 " "	·	1	·	·	·	·	·	·	·	·	·	1
1 Francis Place	·	·	·	·	·	·	·	·	·	·	·	1
40 Frankfort Street	·	·	·	·	·	·	·	·	·	·	·	1
24 Frederick Street, E.	·	·	1	·	·	·	·	·	·	·	·	1
2 Friary Green	·	·	1	·	·	·	·	·	·	·	·	1
71 Gainsborough Terrace	·	1	·	·	·	·	·	·	·	·	·	1
5 Garden Crescent	·	·	·	·	·	1	·	·	·	·	·	1
3 Gilwell Cottages, W.	·	·	1	·	·	·	·	·	·	·	·	1
1 " Street	·	·	·	·	·	1	·	·	·	·	·	1
11 " "	·	·	·	·	·	·	·	·	·	·	·	1

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS.
37 Grenville Road, S.	I	..	..	..	..	..	..	..	..	I
6 Grosvenor Cottages	I	I
16 Headland Park	..	I	..	..	..	..	..	..	..	..	..	I
17 " "	I
49 " "	I	..	..	..	..	..	I	..	..	I
8 Henry Street	I
62 High Street	I	..	..	..	..	..	..	..	..	I
6 Higher Street	I
10 " "	I	..	..	..	..	..	I
24 " "	I	..	..	I
46 Hill Park Crescent	I
50 " "	..	I	..	..	..	..	..	..	..	..	..	I
64 " "	I	..	..	..	..	..	..	..	I	2
13 Hoe Street	I	I
19 1/2 " "	I	I
4 Holyrood Place	..	I	..	..	..	..	..	..	..	..	..	I
5 Houndiscombe Villas	I	..	..	..	..	..	I
3 How Street	..	I	..	..	..	..	..	..	..	..	..	I
23 " "	..	I	..	..	..	..	..	..	..	..	..	I

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Group	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
32 How Street	..	1	..	..	..	..	..	..	..	..	..	1
5 James Street	1	..	..	..	..	..	1
7 " "	1	1
27 " "	1	..	..	1
7 Julian Street	1	1
15 " "	..	1	..	..	..	..	..	..	..	..	..	1
21 " "	1	1
22 " "	..	3	..	..	..	..	..	..	..	..	..	3
19 Kensington Terrace	..	1	..	..	..	..	..	..	..	..	..	1
59 King Street	..	1	..	..	..	..	..	..	..	..	..	1
61 " "	..	1	..	..	..	..	..	..	..	..	..	1
96 " "	..	1	..	..	..	..	..	..	..	..	..	1
132 " "	1	1
147 " "	1	1
152 " "	2
17 Knighton Road	..	3	2	..	..	..	..	..	..	..	..	3
10 Laura Street	1	1

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
8 Laira Terrace	..	2	..	..	..	..	..	..	..	..	..	2
8 Lambhay Hill	..	1	..	..	..	..	..	..	..	..	..	1
11 " "	1	..	..	..	..	..	1
4 Langham Place, E.	..	1	..	..	..	..	..	..	..	..	..	1
1 " " W.	1
5 Lifton Villas	1	1
3 Lipson Hill	1
15 " Vale	1
14 Lisson Grove	1
83 " "	1	..	..	..	..	..	1
4 Little Morley Lane	1	1
D. & C. Female Orphan Asylum, Lockyer Street	1	1
18 Lockyer Street	..	1	..	..	..	..	..	..	..	..	..	1
Homœopathic Hospital, Lockyer Street	1	1
9 Looe Street	1	1
26 " "	..	1	..	..	..	..	..	..	..	..	..	1
2 Mainstone Avenue	1	..	..	..	..	..	..	..	..	1
11 " "	1	1
39 " "	..	1	..	..	..	..	..	..	..	..	..	1

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Croup	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
3 Mainstone Terrace, E.	-	1	1
28 "	-	1	1
28 Martin Street	-	1	1
1 Melbourne Place	-	..	1	..	..	..	..	..	..	..	..	1
23 " Street	-	1
26 "	-	1	1
3 Mildmay Street	-	1	1
25 Millbay Road	-	1	..	..	..	..	..	..	..	..	1	1
9 Moon Street	-	1	1
8 Mutley Plain	-	1	..	..	..	..	..	..	..	..	1	1
19 " "	-	1	1
23 Neswick Street	-	..	1	..	..	..	..	..	..	..	..	1
12 Nichol's Court	-	1	..	1	..	..	..	..	..	2
" "	-	1	1
9 Norley Place	-	..	1	..	..	..	..	..	..	..	..	1
4 " Street	-	..	1	..	..	..	..	..	..	..	..	1
63 Notte Street	-	1	1
3 Oakfield Terrace	-	..	1	..	..	..	..	..	..	..	..	1

ZYMOTIC DISEASES--STREET LIST, 1895.

[illegible]

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Group	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
16 Richmond Street	..	1	..	..	..	..	..	..	..	..	..	1
33 " "	1	..	..	..	..	..	1
35 " "	1	..	..	..	..	..	1
54 " "	1	1
15 Rockingham Terrace	1	..	..	1
3 Russell Street	1	..	..	..	..	..	..	..	..	1
15 St. Hilary Terrace	..	3	..	..	..	..	..	..	..	..	..	3
2 St. James' Place	1	..	..	..	..	..	1
6 St. Jude's Terrace	1
27 Seymour Avenue, W.	1	..	..	..	..	..	..	..	..	1
3 Seymour Street	..	1	..	..	..	..	..	..	..	..	..	1
16 Shaftesbury Cottages	1	..	..	..	..	..	..	..	..	1
39 " "	1	..	..	..	..	..	1
10 Sidmouth Terrace	1	..	..	..	..	..	..	..	..	1
12 Smeaton Terrace	..	1	..	..	..	..	..	..	..	..	..	1
South Devon Hospital	..	2	..	..	..	..	..	..	..	..	..	3
9 South Devon Place	..	1	..	..	..	..	..	..	..	..	..	1
22 " "	1	1
26 South Milton Street	1	1

ZYMOTIC DISEASES—STREET LIST, 1895.

89

	Small Pox,	Scarlet Fever	Diphtheria	Membranous Croup.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Relapsing Fever	Puerperal Fever.	Cholera.	Erysipelas.	TOTALS.
32 Southern Terrace	I	..	..	..	..	..	..	..	..	I
30 Southside Street	2	2
36 " "	I	..	..	..	..	..	..	..	..	I
6 Spencer Terrace	I
19 Staddon Terrace	..	I	..	..	..	..	..	..	..	..	..	I
23 Tavistock Place	I
43 " " (Ivy Cottage)	I	..	..	..	..	..	I
23 Thurlestone Terrace	I
3 Tothill Place	..	I	..	..	..	..	..	..	..	..	..	I
32 Tresillian Street	I
21 " Terrace	..	I	I	..	..	..	..	..	..	..	..	I
35 Treville Street	I
40 " "	I
47 " "	..	I	..	..	..	..	..	..	..	..	..	I
163 Union Street	..	I	..	..	..	..	..	..	..	..	..	I
6 Vauxhall Street	I	..	..	..	..	..	..	..	I

ZYMOTIC DISEASES—STREET LIST, 1895.

	Small Pox.	Scarlet Fever	Diphtheria.	Membranous Group.	Typhus Fever.	Typhoid Fever.	Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	TOTALS.
13 Vauxhall Street	1
4+ " "	..	1	..	..	..	..	..	..	..	..	..	1
2 Vennel Street	1
24 Victoria Street	1	..	..	..	..	..	1
28 Washington Street	1
4 Waterloo Street	1
12 " "	1	..	..	..	..	..	..	..	..	1
7 Watson Place	1	..	..	..	..	..	1
22 Well Street	1
30 " "	1
55 " "	1
66 " "	1
70 " "	1
15 Wellington Street	1	..	..	..	..	..	1
21 " "	..	1	..	..	..	..	..	..	..	..	..	1
14 Westminster Terrace	1	..	..	..	..	..	1
7 Westwell Street	..	1	..	..	..	..	..	..	..	..	..	1
5 Whimble Street	1
38 William Street	1	1

ZYMOtic DISEASES—STREET LIST, 1895.

	Small Pox	Scarlet Fever	Diphtheria	Membranous Group	Typhus Fever	Typhoid Fever	Continued Fever	Relapsing Fever	Puerperal Fever	Cholera	Erysipelas	TOTALS
27 Willow Street	1	1
31 Wolsdon Street	1	1
15 Wolseley Terrace	1	1
21 Woodland Terrace	1	..	..	..	..	..	..	..	1	1
4 Woodside	1	1
18 Woolster Street	..	1	..	..	..	..	..	..	..	..	1	1
37 " "	1	1
10 Wootton Cottages	1	1
Workhouse	..	2	..	1	..	1	..	..	..	..	7	11
9 Wyndham Street, W. (Convent of Notre Dame)	1	..	..	..	..	..	..	..	..	1
3 York Street	1	1
25 " "	1	..	..	1

Slaughter-houses.—In reference to the Slaughter-houses in the Borough, I can only reiterate the statements made in former reports in reference to their condition and position ; and to urge the Corporation to take measures for the abolition of Private Slaughter-houses, replacing them by public Abbatoirs in some convenient situation, easily accessible. Having regard to the evidence given before the Royal Commission on Tuberculosis, it is absolutely essential for the public welfare, that all cattle intended for the food of man should be free from tuberculous disease, or suspicion of disease, and to this end it is necessary that each animal before slaughtering should be examined by a skilled veterinary. Even more important is the condition of dairy cattle, the sale of milk from cows infected with tubercule should be most stringently prohibited ; all dairy cattle should be periodically examined (say once in three months) for evidence of tubercule. The municipality that initiates such a system as I have suggested will, by practice and example, render good service in the prevention of that scourge in our country—tuberculosis.

Plymouth Meteorological Observatory.

11 MOUNT GOULD ROAD, PLYMOUTH.

19TH MARCH, 1896.

*To the Chairman and Members
of the Sanitary Committee.*

GENTLEMEN,

It is with much pleasure I have the honour of submitting my Annual Report on the administration of the Observatory during 1895, together with the chief meteorological conditions observed during the year.

The equipment of the Observatory remains precisely the same as mentioned in my last Report.

The observations have been regularly taken, twice daily, at the hours of 9 a.m. and 9 p.m. (local time) and in this portion of the work I have again received most valuable assistance from Mr. E. H. Whiteford, Mr. J. Jeffery and Mr. W. F. Creber, to all of whom I am greatly indebted, as well as to Messrs. Chalice and Venton, the caretakers at Freedom Fields, for registering the rainfall at that place.

Reports have been furnished each day to the "Western Morning News" and "Western Daily Mercury" and also weekly reports to the last named, the former having discontinued publishing them.

At the end of each fortnight returns have been furnished to the Medical Officer of Health, and the Meteorological Office has been supplied with Agricultural Statistics of the weather at the end of each week, and detailed monthly Reports.

I have again had pleasure in contributing Climatological Reports to S. Trevail, Esq., Chairman of Sanitary Committee, Cornwall County Council, for publication in the Monthly Health Reports issued by that Authority, and also to P. Amery, Esq., Secretary Climatological Committee, Devonshire Association, for insertion in the Association's Proceedings.

During the visit of the Journalists' Institution in September, I issued, each morning, Climatological Reports, and had them delivered at the various Hotels and Restaurants, as well as to the "Western Evening Herald" for publication in that journal, the latter reports have been continued to be supplied ever since.

The Annual Rainfall Statistics have been sent to G. J. Symons, Esq., F.R.S., for inclusion in his "British Rainfall for 1895."

With the object of being better able to advise as to the completion of the equipment of this Observatory, I visited—through the courtesy of the respective Superintendents, E. Kitto, Esq., F.R.M.S., and A. Chandler, Esq., F.R.M.S.—the Observatories at Falmouth and Torquay.

The Falmouth Observatory being a Station of the 1st Order, the majority of the instruments are of self-recording type, and include an Anemograph for registering the direction and velocity of the wind, and one of Beckley's Pluvographs or self-recording Rain Gauge.

The Torquay Observatory is a Station of the 2nd Order, similar to the one here, and is organised and maintained by the Town Council, it is fully equipped, and has a computing room built on the site, on the roof of which, the Sunshine Recorders—

this Station having two—and the Anemograph are fixed, the latter instrument being connected with the recording portion, which is fixed in the room.

At this Observatory, Climatological Reports are prepared each morning, and distributed to the various Hotels and Boarding houses, and also placed in prominent positions in the Town ; during the afternoon observations are again taken, and Reports are telegraphed to several newspapers for insertion in the next day's issue, amongst which are the "Newcastle Chronicle," "Glasgow Daily Mail," "Sheffield Daily Telegraph," "Leeds Yorkshire Post," "Liverpool Daily Post," "Liverpool and Manchester Journal of Commerce," "Birmingham Gazette," "Birmingham Daily Post," "Bradford Observer," "Bristol Times and Mirror," "The Standard," and "Daily Chronicle."

It is undoubtedly by these means that the Climate of Torquay is so widely known, and so fully appreciated.

It is therefore my privilege to point out that the climate of Plymouth compares most favourably with Torquay, Falmouth and Penzance, and many of the towns in the western counties which are known as health and pleasure resorts.

Should you deem it advisable to have the particulars of the climate of Plymouth circulated in a similar manner, it will afford me much pleasure to submit the particulars of expenditure which would be involved in carrying it out.

From the comments which have appeared in the local press, and from enquiries which I have received from the executive officers of the Mercantile Association, I believe such a course would meet with general approval.

The equipment of the Observatory still remains incomplete for the want of an Anemograph for registering the direction and force of the wind, an automatic Rain Gauge and a few minor instruments.

Early in September the station was inspected by E. H. Bayley, Esq., of the Meteorological Office, London, by whom all the instruments were tested and found to be in a satisfactory condition.

Through the courtesy of Dr. A. N. Davis, a register of the rainfall at Blackadon has been kept throughout the year, the particulars of which will be found in the table at the end of this report.

In my last report I mentioned the fallacy which has been, and is at present circulated, even by some persons who in most matters have the interest of the town at heart, respecting the rainfall, and as I think too much importance cannot be placed upon the necessity of refuting these statements, is my plea for again including table No. 7 with my report.

As the Medical Officer's Quarterly Reports have been discontinued, I have inserted my remarks on the months, which were formerly published in the Quarterly Reports, at the commencement of the accompanying tables.

In order to have this Report more complete, an Appendix, dealing with the Temperature, Sunshine, and Rainfall, during the year at some of the Health Resorts, has been added. The information has been kindly supplied by the various Observers, and their names are given in the Appendix.

It is unnecessary to say anything here regarding the Tables at the end of the Report, as I have this year prepared all necessary explanatory notes, which will be found accompanying them.

I cannot conclude without tendering you my sincere thanks for your kind assistance and cordial co-operation throughout the past year.

I have the honour to be, Gentlemen,

Your obedient Servant,

H. VICTOR PRIGG.

RESULTS OF OBSERVATIONS MADE DURING THE YEAR 1895.

The Observatory is situated on "The Hoe" to the north of the Gardener's Lodge, and is in latitude $50^{\circ} 21' 44''$ N; longitude $4^{\circ} 8' 20''$ W; it is 117 above mean sea level.

The barometer, is a marine pattern by Adie, and has been verified at Kew Observatory, and is fixed at 116 feet above sea level.

The thermometers are by Negretti and Zambra, and were supplied through the Meteorological Office, they have been verified at Kew Observatory.

All the readings of barometer and thermometers are corrected for index error.

The duration of bright sunshine is ascertained by a Campbell-Stokes' Sunshine Recorder.

The rain gauges are the Meteorological Office pattern, made of copper and eight inches in diameter and are fixed, 10 inches above the ground, and the one at "The Hoe" is 117 feet, and that at Freedom Fields, 208 feet above mean sea level.

All the instruments are read at 9 a.m. and 9 p.m. each day.

The direction of the wind is taken to true and not magnetic bearings.

The averages with which the results in the tables of temperature and atmospheric pressure are compared with, is the average of ten years—1880 to 1889 inclusive; and in the table of rainfall the average of 20 years—1870 to 1889 inclusive.

CHIEF CHARACTERISTICS OF THE MONTHS DURING 1895.

JANUARY. The weather was very cold and changeable, with falls of snow and hail ; a thunderstorm occurred on the 7th.

The Mean Temperature was below the average. Frosts were registered in the screen on 17 days, and on the grass on 18 days. The minimum on the grass was 22 degrees on the 28th. The pressure of the Atmosphere fluctuated considerably, the mean pressure was below the average.

Rainfall was above the average. The total hours of bright sunshine, 73.4 being 30 hours more than the average.

FEBRUARY. Intensely cold throughout, frosts being registered on the grass during 24 nights, during two days it was freezing throughout, rainfall was very deficient. Atmospheric pressure was fairly high and steady. Large amount of bright sunshine was recorded.

MARCH. During the greater portion of first three weeks, the weather continued very cold and changeable with snow at intervals, later on the temperature rose steadily, and unsettled and squally weather set in and lasted until the end of the month. Mean temperature was slightly below the average. Mean pressure was little below average. Rain fell during early and latter portions of the month, total amounted to half an inch above average. Middle of month dry but dull.

APRIL. Fine, dry, and fairly mild during early part of month, excepting on 8th and 9th. when fogs prevailed, the latter part was unsettled and variable, with rain and strong winds. Frost upon the grass during one night. Mean temperature about average. South-easterly and south-westerly gales on 14th and 22nd. Pressure unsteady throughout, but fairly high. Rainfall distributed over 16 days mostly towards latter end of month. Sunshine slightly deficient.

MAY. Beautifully fine, dry, and warm, with an exceptional amount of sunshine. The mean temperature about average ; on four days the maximum in shade was above 70 degrees, and the minimum during seven nights above 50 degrees. Pressure was high and steady. Rainfall $\frac{3}{4}$ in. below average, and fell in showers during 4 days. Moderate northerly gale on 16th.

JUNE.—During the greater part of the month the weather was fine and dry, with large amount of sunshine, the last few days however were wet and dirty. Mean temperature, below average. Daily range, rather high. Maximum temperature in shade, above 70 degrees on 7 days. Rainfall nearly half an inch in excess of average, but was confined to 8 days, interspersed throughout the month. Sunshine considerably above average, over 12 hours per day was recorded during a third of the month. Light south-westerly to westerly winds predominated. Air was warm and dry. Relative humidity at 9 a.m., 16th, 51.

JULY. Somewhat cool, cloudy, and damp month. Mean temperature, 3'0 degrees below average. Daily range very small. Light variable winds during first half of month, southerly winds strong at times during latter half. Rainfall above average, very heavy towards end of month. Normal amount of sunshine. Thick sea fog on 24th, 25th, and 26th. Thunderstorm on the 1st.

AUGUST. During first fortnight the weather was very wet and unsettled, but brighter and fairly fine afterwards. Temperature little more than 2'0 degrees below average. Mean daily range was small. Air cool and moist throughout. Rainfall rather more than three-fourths of an inch in excess of average, sixth-sevenths of the month's total was recorded during first fortnight. Bright sunshine was very deficient. Barometer indicated considerable atmospheric disturbance. Large amount of south-westerly wind.

SEPTEMBER. An exceptionally warm, bright, and dry month. Temperature exceptionally high towards end of month, during 10 days the maximum in shade was above 70 degrees, the highest

being 78·5 on 27th, which was the highest for the year. Mean temperature nearly 4·0 degrees above average, and has only been exceeded twice during past 30 years. Bright sunshine over 80 hours in excess of average. Rainfall, more than 3 inches below average, and was the least recorded for 30 years. Winds light and dry, easterly and north-easterly being most prevalent. Thunderstorms on 6th and 7th.

OCTOBER. Changeable throughout ; mild at first with heavy rains and strong south-westerly gales, then cold and sharp frosts. Mean temperature, 1·0 degree below average. Frost registered in screen one day and on grass seven days. Rainfall little above average, and fell during 17 days. Bright sunshine little above normal. Wind was very variable. Gales on 2nd and 4th.

NOVEMBER. The weather during the first half of the month was very unsettled, with heavy rain at frequent intervals. Temperature much above average, but pressure little below. Mean Temperature more than 3·0 degrees in excess of average. Mean daily range, very small. Rainfall over 2½ inches above average, and fell during 22 days. Sunshine, slightly above average. Winds chiefly from south-west. Gales occurred on 10th, 15th, 16th, and 21st.

DECEMBER. Very wet, mild and squally month, with very small amount of bright sunshine. Mean temperature, 2·0 degrees above average, the mean daily range very slight. No frosts registered in screen, but on the grass, frost was registered during four nights. Barometer indicated considerable oscillation of atmosphere during month. Most sunless month of the year; sunshine nearly 50 per cent below average. Rainfall, over 2½ inches above average, and was distributed over 27 days.

THE YEAR. The year has presented many and varied meteorological phenomena, the most striking of which was the low

temperature and continuous frosts during January and February ; the deficiency of rainfall in February and September ; the abnormal amount of sunshine during May—which was nearly one-sixth of the year's total, and the exceptionally high temperature in September and the mildness of November and December.

Table No. 1. TEMPERATURE IN STEVENSON SCREEN.

	* Mean Temperature	† Difference from Average.	* Means of		* Mean Daily Range.	Absolute Temperature.		
			Maximum.	Minimum.		Maximum.	Date.	Minimum.
1895.								
January	36.8	—3.8	41.8	31.8	10.2	49.9	20th	22.0
February	33.2	—9.1	38.0	28.5	9.4	46.0	28th	19.0
March	42.7	—0.5	48.4	37.0	11.4	59.9	21st	28.4
April	47.2	—0.5	52.2	42.3	9.9	60.1	17th	32.5
May	53.9	+0.3	61.7	46.1	15.5	72.2	30th	36.8
June	58.4	—0.9	65.8	51.0	14.1	77.6	8th	40.5
July	59.0	—3.0	64.0	54.0	10.0	67.8	8th	48.0
August	59.1	—2.2	64.3	53.8	10.4	70.6	17th	45.0
September	61.0	+3.8	68.5	53.5	14.9	78.5	27th	43.5
October	48.8	—1.0	54.5	43.1	11.7	65.9	1st	30.0
November	50.3	+3.2	54.3	46.3	8.0	59.4	16th	35.5
December	44.9	+2.2	48.7	41.0	7.7	53.9	31st	32.1
Means	49.6	—0.8	55.1	44.0	11.1	Highest 78.5	Sept. 27th	Lowest 22.0
								Jan. 27th

* The Mean Temperature given above are the Means of the daily readings of the Maximum and Minimum Thermometers.

† The Average here referred to is the average of 10 years, 1880 to 1889 inclusive.

REMARKS (TABLE No. 1).

Remarks on the Temperature of the Air.

The mean temperature of the air for the year was very slightly below the average—only 0·8 degree. During several of the months, however, there was considerable divergence from the average, both above and below.

The greatest difference occurred during February, which was 9·1 degrees below the average, and was the coldest February during the past 28 years. January was 3·8 degrees below the average, and September 3·8 degrees above.

November was the warmest during the past 28 years, and December was very warm—2·2 degrees above average.

The highest temperature registered for the year was 78·5 degrees on the 27th day of September, and the lowest, 22·0 degrees, on the 27th of January. The warmest night temperature was 61·0 degrees on the 9th of September, and the coldest day temperature was 29·6 degrees on the 6th of February.

Table No. 2. ATMOSPHERIC PRESSURE.

1895.	Mean Pressure (at 32° F. and Sea Level.)	Difference from Average.	Highest.	Date.	Lowest.	Date.	Observed Monthly Range.
	inches.	inches.	inches.		inches.		inches.
January	29.695	-0.334	30.479	30th	28.812	13th	1.667
February	30.039	+0.149	30.431	17th	29.400	10th	1.031
March	29.780	-0.187	30.426	15th	28.971	28th	1.455
April	29.912	+0.009	30.412	11th	29.430	25th	0.982
May	30.094	+0.109	30.599	2nd	29.719	19th	0.880
June	30.088	+0.073	30.458	23rd	29.660	30th	0.798
July	29.920	-0.047	30.293	5th	29.406	20th	0.887
August	29.946	-0.042	30.324	25th	29.426	4th	0.898
September	30.139	+0.147	30.336	20th	29.843	10th	0.493
October	30.046	+0.097	30.458	17th	29.179	8th	1.279
November	29.849	-0.069	30.377	1st	29.127	10th	1.250
December	29.816	-0.164	30.322	27th	29.089	16th	1.233
Means	29.943	-0.041	30.599	2nd May	28.812	30th Jan.	Annual Range 1.072

REMARKS. (TABLE No. 2.)

Remarks on the Atmospheric Pressure during the year:—

The extremes observed were, 30·599 inches on the 2nd May, and 28·812 inches on the 30th January, giving a total range of 1·787 inches. The greatest monthly range occurred in January, and the least in September. The Mean Pressure was very little below the average.

The highest mean monthly range was 30·139 inches in September, and the lowest 29·695 inches in January, making an extreme mean monthly range of 0·444 of an inch.

Table No. 3. DURATION OF BRIGHT SUNSHINE.

1895.	Actual Sunshine (hours).	Percentage of Possible.	Difference from Average (hours).	Greatest Daily Amount (hours).	Percentage of Possible.	Sunny Days.	Sunless Days.
January	73.4	28	+30.0	6.32	76	24	7
February	93.1	34	+18.5	8.80	83	22	6
March	120.9	33	-10.5	9.30	80	24	7
April	155.1	38	-14.0	12.50	92	27	3
May	300.9	64	+94.2	13.85	85	30	1
June	288.4	60	+85.9	14.62	88	29	1
July	190.8	39	-1.4	14.50	88	26	5
August	177.9	40	-16.9	12.00	82	30	1
September	227.6	61	+80.1	11.90	89	29	1
October	109.8	34	+6.5	9.25	82	26	5
November	60.6	23	+3.4	7.41	82	22	8
December	27.2	11	-24.2	4.62	59	18	13
Totals and Means	1825.7	38	+251.6	14.62	88	307	58

REMARKS. (TABLE No. 3).

Remarks on the Duration of Bright Sunshine.

Bright Sunshine throughout the year was considerably above the average of 10 years, 1881-1890. The excess being greatest during May, June, and September, which were 45, 29, and 35 per cent. in excess, respectively. During five months the Sunshine was deficient, December being the dullest, only 27·2 hours of Sunshine registered, which was more than 52 per cent. below the average.

The brightest day of the year was the 20th of June, upon which day 14·62 hours were registered. The mean daily Sunshine was exactly five hours. There were 307 days upon which Sunshine was registered, and 58 sunless days.

REMARKS. (TABLE No. 4.)

Remarks on the Rainfall.

During nine months of the year, the quantity measured was above the average, the wettest months being January, November, and December, and the driest, February, May and September. February was the driest recorded here since 1866. A period of drought commenced on the 30th of January, and lasted until the 28th of February—29 days. One inch and more, during 24 hours, was registered on three days at the Hoe, three days at Freedom Fields, and on twelve days at Blackadon Asylum. Blackadon Asylum is situated about thirteen miles east of Plymouth, on the south-east border of Dartmoor, and the gauge is fixed at a height of 607 feet above sea level. The mean wet day rainfall for the year at Plymouth was 0·21 inch.

Table No. 5. AMOUNT OF CLOUD, RELATIVE HUMIDITY,
AND GENERAL PHENOMENA.

1895.	Mean amount of Cloud.		Mean relative humid- ity. Saturation: 100		Number of Days observed.						
	9 a.m.	9 p.m.	9 a.m.	9 p.m.	Fog.	Snow.	Hail.	Clear Sky.	O'cast.	Thunder- storm.	Distant Lightning.
January	6.3	4.2	84	82	1	7	1	11	8	1	0
February	6.2	4.8	80	75	0	0	0	12	9	0	0
March	6.9	4.4	86	87	5	2	0	9	9	0	0
April	6.7	6.3	83	88	3	0	0	10	6	0	0
May	4.3	3.0	69	79	2	0	0	18	6	0	0
June	5.3	4.5	74	81	1	0	0	15	3	0	0
July	6.8	6.2	80	88	3	0	0	7	3	1	0
August	7.4	5.1	84	90	1	0	0	6	5	0	0
September	3.8	2.6	79	89	3	0	0	11	1	2	2
October	6.7	5.2	92	94	0	0	0	9	10	0	0
November	7.7	6.4	87	90	3	0	0	3	9	0	0
December	8.8	6.7	89	89	8	0	0	0	14	0	1
Means and Totals	6.4	4.9	82	86	30	9	1	111	83	4	3

REMARKS. (TABLE No. 5.)

Amount of Cloud, Relative Humidity, &c :—

The sky was very clear during the months—January, February, May, June and September, and consequently during these months the least amount of cloud was visible. The air was driest during May, on some days of which the Relative Humidity was 50 per cent. There were two days when the Relative Humidity was 49 per cent, which was the driest observed, and this occurred on the 6th of February, at 9 p.m., and the 18th of May, at 9 a.m. Fogs were most prevalent during December.

Table No. 6. DIRECTION OF WIND.

1895.	N. per cent.	N.E. per cent.	E. per cent.	S.E. per cent.	S. per cent.	S.W. per cent.	W. per cent.	N.W. per cent.	Calm. per cent.
January	11	16	5	8	8	11	5	28	8
February	7	45	36	3	...	...	2	2	5
March	14	10	2	6	5	19	13	21	10
April	12	6	12	8	17	22	3	17	3
May	19	10	16	15	3	8	3	18	8
June	18	7	3	7	22	15	10	8	10
July	13	5	...	5	11	31	22	11	2
August	...	3	8	8	7	39	21	11	3
September	8	14	30	3	6	8	12	5	14
October	11	18	11	8	...	11	12	16	13
November	...	15	13	16	7	27	8	14	...
December	3	14	16	8	...	21	15	15	8
Means	10	13	13	8	7	18	10	14	7

REMARKS (TABLE No. 6.)

The Wind during the year was somewhat more variable than usual, the percentage of South Westerly winds being somewhat deficient during the early part of the year, but became more predominant during the latter half and proved to be the prevailing wind. North Easterly to North Westerly winds prevailed during January and February, which was conducive to the prolonged cold which was recorded in those months. Gales were experienced on thirteen occasions, chiefly from the South East to South West, five of which occurred in November. Fortunately they were not attended with loss of life in this neighbourhood, although one or two vessels were wrecked.

Table No. 7. RAINFALL STATISTICS OF SEVERAL HEALTH RESORTS IN THE
SOUTH-WESTERN COUNTIES.

	Cheltenham.	Exmouth.	Weymouth.	PLYMOUTH	Teignmouth.	Bath.
Number of Wet Days ...	159	164	168	176	177	178
Average Rainfall (inches)	27·66	32·94	32·49	37·98	35·43	31·33

	Torquay.	Ilfracombe.	Sidmouth.	Falmouth.	Penzance.
Number of Wet Days ..	180	183	185	186	227
Average Rainfall (inches)	35·46.	26·87	31·86	44·97	45·15

APPENDIX.

APPENDIX.

COMPARATIVE STATISTICS, 1895.

STATION.	Mean Temperature.	Mean daily range of Temperature.	Total Bright Sunshine. (Hours).	Total Rainfall.	Number of Wet Days.
PLYMOUTH ...	49.6	11.1	1825.7	37.72	174
Torquay ...	49.4	12.7	1588.3	34.37	178
Eastbourne ...	49.3	10.5	1883.0	30.75	164
Margate ...	48.9	12.4	1549.2	19.76	157
Southport ...	47.1	11.5	1583.0	26.97	177
Falmouth ...	51.4	10.5	1980.0	41.92	179
Truro ...	50.3	13.8	*1831.2	40.55	182
Newquay ...	50.0	9.5	1896.2	35.42	186
Ilfracombe ...	50.4	8.5	...	35.45	154
Bude ...	49.4	12.5	...	32.56	130
Tavistock ...	48.8	15.0	...	47.79	189
Hastings ...	49.1	...	1889.4	28.60	149
Douglas ...	47.2	...	1651.0	34.71	181
Blackpool ...	47.4	...	1468.4	29.23	176
Llandudno ...	49.0	...	1571.1	30.04	184
Scilly ...	51.8	...	1908.1	29.86	187
Jersey ...	51.9	...	2117.1	34.82	189

*Jordan's Photographic Recorder.

REMARKS (APPENDIX).

The particulars incorporated in the table of comparisons with other health resorts, as far as relates to the following towns, Torquay, Eastbourne, Margate, Southport, Falmouth, Truro, Newquay, Ilfracombe, Bude, and Tavistock, have been kindly furnished to me by A. Chandler, Esq., F.R.M.S., Borough Meteorologist, Torquay ; R. Sheward, Esq., F.R.M.S., Borough Meteorologist, Eastbourne ; J. Stokes, Esq., Borough Meteorologist, Margate ; J. Baxendell, Esq., F.R.M.S., Borough Meteorologist, Southport ; E. Kitto, Esq., F.R.M.S., Superintendent, Falmouth Observatory ; R. A. Gregg, Esq., Truro ; Dr. A. Hardwick, F.R.M.S., Medical Officer of Health, Newquay ; M. W. Tattam, Esq., Superintendent Ilfracombe Observatory ; J. Arthur, Esq., Bude, and E. Glyde, Esq., F.R.M.S., Tavistock, respectively, to all of whom I tender my thanks. The particulars of the remaining stations have been extracted from the monthly summaries published by the Meteorological Office.

PART III.

Report of Borough Analyst.

BOROUGH LABORATORY,

MUNICIPAL BUILDINGS,

PLYMOUTH,

20th February, 1896.

GENTLEMEN,

I have the honour of reporting that 101 samples of Food were received for analysis during the year.

They consisted of:—

Milk	...	...	40	2 adulterated.
Butter	...	...	26	genuine.
Lard	...	...	9	"
Irish Whisky	...	...	7	"
Lemonade	...	...	7	"
Soda Water	...	...	6	3 deficient in Soda.
Ginger Ale	...	...	1	genuine.
Lithia Water	...	...	1	"
Cream	...	...	4	"
			<hr/> 101 <hr/>	

Of these, five samples were either adulterated or deficient in quality, *i.e.* nearly five per cent.

MILK.—Only two out of 40 specimens submitted were found actually adulterated: one to which 12 per cent. of water had been added, while the other had the cream abstracted from it to the extent of 25 per cent. Prosecutions were instituted by the Town Clerk and convictions with fines obtained in both instances. Several other samples were of extremely poor quality, but analysis shewed them to fall just within the unreasonably low standard still persisted in by the Somerset House Authorities, hence they were certified as genuine.

Assuming the amount of adulteration detected this year to represent the actual condition of the milk sold throughout the town, the results of increased activity in working the Act in this direction during the last few years are satisfactory and gratifying.

In 1892. 39·4 per cent. of the milk examined was adulterated.

1893. 45·4	„	„	„	„
1894. 14·6.	„	„	„	„
1895. 5·0 only	„	„	„	„

It is to be feared, however, that so edifying a spectacle as this suggests of the dairyman reluctantly forsaking his ancient allies, the pump and the separator, cannot be credited, and that it is really misleading.

The fact is, your Inspector and his methods are so well known, that he has the greatest difficulty in securing an adulterated sample for analysis; he is so much respected that vendors are always anxious and careful to see that he be served with the very best of anything he may happen to inquire for. Nevertheless, it cannot be doubted that a substantial improvement has been effected in the quality of the milk sold in Plymouth through the instrumentality of the Adulteration Act.

SODA WATER.—Three of the six samples brought for analysis were genuine, while the others contained from $3\frac{1}{2}$ to 4 grains

of soda, instead of 10 grains per pint. No prosecutions were undertaken for this deficiency, there being some doubt as to whether a conviction could be obtained.

All of the other samples were genuine.

In addition to these, several analysis have been made for the departments of Town Clerk, Medical Officer of Health, Water Engineer, and Borough Surveyor.

PHOTOMETRIC REPORT OF PLYMOUTH GAS FOR 1895.

The illuminating value of the Plymouth Gas has generally been above the standard required by the Local Act, viz., 15 candles. In 106 observations made during the year at the Borough Photometric Station, it fell below 15 candles twenty-eight times, commonly to the extent of one or two tenths only. Whenever the fall much exceeded this amount, tests have been made at the Company's station as required by statute, but there the illuminating value was only once proved to be below 15 candles : this was during the severely cold weather of January.

The monthly averages at the Borough Station were as follows :—

January ...	15·41	July ..	16·05
February ...	15·10	August ...	15·27
March ...	15·39	September .	15·25
April ...	15·20	October ...	15·17
May ...	15·33	November .	15·31
June ...	15·29	December .	15·01

The average for the whole year was 15·31 standard candles.

On no occasion has any sulphuretted Hydrogen been found in the gas.

I am, Gentlemen,

Yours faithfully,

CHAS. E. BEAN, F.R.C.S.E.

ANNUAL REPORT OF THE PORT MEDICAL OFFICER
FOR 1895.

~~~~~  
Plymouth Port Sanitary Authority.  
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GENTLEMEN,

I have the honour of submitting to you my fifth annual report upon the health of the floating population of the Port and the administration work carried out by your officials.

During the year, 207 cases of sickness have been reported to me as existing on vessels arriving at the port. Each vessel having sickness on board has been medically inspected immediately upon arrival by myself or deputy.

The number of vessels medically inspected during the year numbered 124, having crews numbering in the aggregate to 8,000, and carrying 4,000 passengers.

Three cases have been removed to the "Pique" for treatment,—one case of severe Influenza, one case of Enteric Fever, and one case of Scarlet Fever. These cases were discharged cured. A detailed list of cases will be found appended.

The customary daily visiting and inspection of vessels has been carried out throughout the year by the Inspector at the

Docks and wharves, and in the Sound. In this manner, some 3,012 vessels have been visited for enquiries and inspected, 196 of which were in an unsanitary condition, and required cleansing, painting, lime-washing, or some slight repairs to forecastles.

I would call your attention to the fact that in all probability this is the last year in which the quarantine laws will be in operation. Medical inspection of all vessels having infectious sickness on board or arriving from infected ports will be required, thus substituting medical inspection for quarantine. The local authorities will replace the central authorities in carrying out this work, and will be responsible for the due performance of this duty. The utmost vigilance will be necessary to prevent extension of infectious disease, as persons will be able to visit or leave any vessel as they please, the law only dealing with those infected and their attendants; no pratique certificate will be required as is the present custom.

The necessary disinfection of cabins, forecastles, &c., in which cases of infectious sickness have occurred, has been carried out by the Inspector under my supervision; the bedding and clothing have been disinfected at the disinfecting station of the Urban Sanitary Authority, your Authority not possessing a disinfecting apparatus.

I must take this opportunity of expressing my thanks to the Officers of H.M. Customs, the Shipping Agents, and the G.W. Docks officials for their co-operation, and the facilities they have always afforded your officials in carrying out their duties.

I beg to tender to the Chairman and members of your Committee my thanks for their support and assistance during the past year.

I remain, Gentlemen,

Your obedient Servant,

F. M. WILLIAMS.

Cases of Sickness reported to the Port Sanitary Officials and seen by the
Port Medical Officer during the Year 1895.

Date.	Ship's Name.	Nature of Sickness or Accident.
January 14	Aras	s.s. Mate injury to head
" 24	Guldreen	sh. Boy, broken thigh, fall from aloft
" 24	Don	s.s. 2 cases Intermittent fever
" 25	Australia	s.s. 1 death, Pneumonia; 1 case Intermittent fever
February 1	Carrie Belle	sc. Sprained ankle
" 5	Joshua Nicholson	s.s. 1 seaman, fits; 1 do. intestinal obstruction
" 9	Fortuna	s.s. 1 injured leg
" 11	Rival	s.s. 1 fractured leg, to S.D. & E.C. Hospital
" 21	Eleanor	s.s. Mate, severe cold
" 21	Para	s.s. 4 cases Malarial fever
" 26	Mirzapore	s.s. 2 deaths, Gastro Enteritis; 1 suicide; 1 case malarial fever
" 28	Rose of Devon	bk. Seaman, severe cold, to S.D. & E.C. Hospital
March 4	Goatfell	" 1 Periostitis of Tibia
" 4	Ranmore	s.s. 1 Sub acute rheumatism
" 5	N. C. Bull	sc. 2 Severe cold and Bronchitis
" 6	Medway	s.s. 1 Erysipelas, 1 malarial fever
" 7	Lord Wolseley	sh. Mate, fractured arm; 1 seaman, heart disease; 1 do. Bronchitis and Debility; 1 do., ulcerated leg and Bronchitis: 1 debility, and 1 death peritonitis
" 7	"	
" 7	"	

Cases of Sickness reported, &c.—(Continued.)

Date.	Ship's Name.	Nature of Sickness or Accident.
March 13	Britannia, Telgph. s.s.	Engineer, Influenza 2 other cases not seen on board during the time the vessel was here.
" 15	Thankful, fishing boat	2 men, Influenza
" 19	Sinclair s.s.	Fireman "
April 8	Valetta s.s.	3 Malarial Fever
" 8	Iberia "	1 Typhoid
" 8	Jalunga "	1 Malarial Fever
" 8	" "	1 Diarrhoea
" 8	" "	1 Death; Marasmus
" 9	Coromandel "	2 Small Pox; landed Colombo
" 9	" "	1 " " Aden
" 9	" "	2 Measles
" 9	Dalcarnie sh.	1 Rheumatism
" 17	Goorkha s.s.	1 Intermittent Fever
" 19	Dunnotar Castle "	1 " "
" 20	Rome "	1 Laryngitis
" 22	Chusan "	1 Death: Peritonitis
" 22	" "	1 " (child); Convulsions
" 22	Francis sh.	1 Rheumatism, 1 Venereal
" 25	Invercoe bk.	1 Consumption
" 26	Oriental "	2 Malarial Fever
" 28	Tartar "	1 Erysipelas

Cases of Sickness reported, &c.—Continued.

Date.	Ship's Name.	Nature of Sickness or Accident.
April 29	Lallah Rookh	1 Consumption
May 1	Oceanic	1 Death; Consumption. (Body embalmed)
" 5	Paramatta	1 Enteric Fever
" 5	Tongariro	2 Deaths; Lung disease
" 5	"	1 " Dropsy
" 9	Himalaya	1 Malarial Fever
" 12	Lusitania	1 Measles
" 15	Medway	3 Malarial Fever
" 15	"	3 Influenza
" 17	Oceana	2 Malta Fever
" 18	Tainui	1 Chicken Pox
" 18	"	1 Phthisis
" 20	Oropesa	1 Death: internal Abscess
" 22	Cothele	3 Malarial Fever
" 27	Linwood	1 Bronchitis; 1 Tonsillitis
" 27	Anna Schwalbe	1 Death, 10 days out from Rozario; Cholera, 81 days here
" 28	Fiona	Master's son, Abscess
" 28	Stephan	1 Feverish Cold
" 29	Orinoco	1 Death: Malarial Fever
" 29	"	1 Pneumonia
" 30	Australia	3 Malarial Fever (to Naval Hospital)
" 30	"	1 Death; Phthisis
" 30	"	1 " Malarial Fever

Cases of Sickness reported, &c.—*Continued.*

Date.	Ship's Name.	Nature of Sickness or Accident.
May 30	Chanticleer	1 Severe Influenza (to Hospital Ship, "Pique")
June 10	Gothic	1 Apoplexy
10	Ganges	4 Malarial Fever (to Naval Hospital)
10	"	1 Scarlet " (to Infectious Hospital)
11	Dunera	1 Death, Heart disease
17	Massilia	1 " Phthisis
17	"	1 Typhoid
18	Bengal	1 Death, Pneumonia; 1 Small Pox, landed Aden
23	Carthage	2 Malarial Fever
25	Para	4 " Death, Heat Apoplexy
25	Avoca	1 " Phthisis
25	"	1 " Softening of the Brain
25	"	1 " Ovarian Tumour
29	Orissa	1 " Remittent Fever
29	"	1 death, Malarial Fever. 1 death Phthisis
July 9	Sutlej	2 Malarial Fever.
10	Atrato	1 Kidney Disease.
10	Doric	Mate, Synovitis of Knee Joint
10	Rose	2 Scarlet Fever.
14	Iberia	1 Malta Fever.
16	Ballarat	Master, Consumption
22	Avenis	Fireman, Dysentery
26	Shelly	"

Date.	Ship's Name.	Nature of Sickness or Accident.
July 29	Britannia	1 death, Phthisis
" 30	Caledonia	1 death, Heat Apoplexy. 2 Dysentery
August 2	Oruba	2 deaths, Phthisis. 1 death, Nephritis
" 3	Clan Monroe	1 death, Rheumatism.
" 3	Duke of Devonshire	1 Pneumonia.
" 6	Western Chief	Seaman, Venereal
" 7	Medway	1 Death, (chief engineer) Heart Disease and Asthma.
" 7	"	6 Malarial Fever.
" 9	Britannia	17 cases Remittent Fever, landed
" 11	Norham Castle	1 death, Delirium Tremens
" 15	Oriental	1 death, Heat Apoplexy. 1 death, Heart Disease
" 15	"	1 Malarial Fever.
" 20	India	2 deaths, Pneumonia
" 21	Don	1 Malarial Fever.
" 21	Georgio Avasotti bk.	Steward, Rheumatism
" 23	Ruapehu	1 death, Gangrene Lung
" 23	"	1 death, Pyæmia
" 25	Rome	1 death, Heart Disease
" 25	"	1 German Measles.
" 25	Oropesa	4 Measles.
" 26	Bodrhuddan	Seaman, Rheumatic Fever
" 27	Nubia	1 death, Malarial Fever. 1 death, Kidney Disease
" 29	Ophir	2 Pleurisy

Cases of Sickness reported, &c.—*Continued.*

Date.	Ship's Name.	Nature of Sickness or Accident.
August 29	Kate B. Jones	Donkeyman, Debility
Sept. 2	Susie	Mate, Indigestion
" 2	Moor	1 death, Heart Disease
" 4	Para	4 Malarial Fever
" 10	Valetta	11 " " R.N., invalided
" 10	"	2 Typhoid. " R.N., " Hospital
" 10	"	1 " " under treatment
" 16	Lusitania	1 Remittent Fever, landed
" 23	Levoni	Mate, Indigestion
October 4	Dunottar Castle	1 case Scarletina, proceeded in vessel
" 5	Henriette	Boy, Scarletina, to Hospital Ship "Pique"
" 8	Gio Batta Barabina	1 Seaman, Swollen Glands in arm
" 11	Peninsular	1 case Malarial fever, to R.N. Hospital
" 16	Medway	1 " " and 1 Beri Beri
" 24	Newark	1 Seaman, scalp wound
" 29	Gothic	1 Small Pox (isolated), proceeded in vessel
" 30	Alpha	Mate, Eczema of hand
Nov. 8	Aldborough	1 death at sea, Consumption
" 12	Prince Patrick	5 cases Malarial fever
" 12	Manila	1 Typhoid
" 12	Goorkha	1 death, Syncope
" 13	Para	2 Malarial fever
" 15	Tantallon Castle	1 Scarletina, proceeded in vessel

Cases of Sickness reported, &c.—*Continued.*

Date	Ship's Name.	Nature of Sickness or Accident.
Nov. 18	Massilia	s.s. 1 accidental death ; 1 Quinsy ; and 1 Rheumatism, to R.N. Hospital
" 22	Rakaia	" 1 death, Heat Apoplexy 1 poisoned hand
" 26	Germanic	" 1 death at sea, Consumption
" 26	Stella	bk. Master, Bronchitis
" 28	Atrato	s.s. 1 Malarial fever
" 29	Arcadia	" 14 " to R.N. Hospital ; and 1 death, Phthisis
Dec. 4	Henriette H.	s.s. 1 Rheumatism
" 4	Stanley	sc. Mate and seaman, Malarial fever
" 8	Shannon	ss. 1 Phthisis, and 1 Rheumatism
" 9	Melrose	" Chief Engineer, sprained foot
" 11	Orinoco	" 1 " and 1 Lunatic to R.N. Hospital
" 21	Cuzco	" 1 Malarial fever
" 22	Athenian (tender)	" 1 " 4 Phthisis to R.N. Hospital
" 23	Carthage	" 4 " "
" 23	Rewa	" 2 " "
" 25	Medway	" 4 " "

Plymouth :

EDWIN CHAPPLE, PRINTER, GEORGE STREET.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (Columns for Population and Births are in Table B.)			MORTALITY FROM ALL CAUSES, AT SPURJOINED AGES						MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE																									
			At all ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	(i)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
											Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	FEVERS.					Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhea or Dysentery.	Rheumatic Fever.	Phtisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Influenza.	Injuries.	All other Diseases.	TOTAL.		
															Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.															
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)																										
St. Andrew ...	156	44	20	4	2	38	48	Under 5	2	8	2	5	6	2	39	64			
								5 upwards	1	7	14	10	6	1	53	92		
St. Peter ...	269	67	32	9	12	96	53	Under 5	1	..	1	11	1	10	...	2	22	1	50	99			
								5 upwards	2	1	25	37	25	9	4	67	170	
St. Saviour ..	42	13	5	4	2	7	11	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	3	1	...	...	5	...	...	...	9	18
								5 upwards	2	1	5	1	3	2	10	24		
St. James ...	84	17	9	4	7	24	23	Under 5	...	...	...	...	...	..	...	...	...	...	...	3	2	...	...	...	4	...	...	...	17	26
								5 upwards	1	4	16	8	2	1	26	58			
All Saints ...	127	36	21	3	4	39	24	Under 5	...	...	...	...	...	...	...	...	...	...	...	5	3	2	1	3	8	...	...	...	35	57
								5 upwards	...	...	...	...	...	...	...	1	...	...	...	1	14	5	11	6	...	32	70			
Christ Church ...	110	29	9	3	3	22	44	Under 5	...	...	...	1	...	..	...	...	...	...	1	3	1	...	...	6	9	10	3	1	41	72
								5 upwards	1	1	6	9	10	3	1	41	72			
St. Matthias ...	78	5	7	2	1	20	43	Under 5	...	...	1	...	..	...	..	...	..	...	...	1	3	...	...	...	1	...	...	...	6	12
								5 upwards	1	1	5	7	3	7	1	41	66			
Holy Trinity ...	85	32	18	1	...	19	15	Under 5	...	1	...	...	...	...	...	...	...	...	...	8	2	8	...	...	14	...	2	...	15	50
								5 upwards	1	5	7	5	1	...	16	35		
Charles ...	217	60	28	8	8	51	62	Under 5	...	...	...	...	...	...	...	...	...	...	...	5	6	2	...	...	26	...	1	1	46	88
								5 upwards	...	...	1	...	...	1	...	...	...	...	...	...	1	17	18	10	2	64	129			
St. Jude ...	209	68	28	3	9	56	45	Under 5	...	...	1	...	...	...	...	...	...	1	...	13	2	7	...	2	21	2	2	...	45	96
								5 upwards	1	1	14	9	12	7	2	67	113			
St. John ...	156	51	30	2	3	47	23	Under 5	...	...	...	...	...	...	...	...	...	1	...	9	2	5	...	2	14	2	1	...	45	81
								5 upwards	...	1	1	1	1	6	10	13	...	3	40	75			
St. Luke ...	72	13	6	1	2	19	31	Under 5	...	...	...	...	...	..	...	...	...	...	...	3	...	1	...	...	2	...	...	1	12	19
								5 upwards	1	1	7	7	6	1	2	28	53	
Emmanuel ...	28	9	4	1	2	5	7	Under 5	...	...	...	...	...	...	...	...	...	...	1	2	...	1	...	...	1	...	...	...	8	13
								5 upwards	2	4	9	15			
Borough Hospital ...	5	1	2	1	...	1	...	Under 5	1	1	1	3			
								5 upwards	1	1	2
								Under 5	...	1	4	4	9
S. D. & E. C. Hospital	47	3	6	5	4	25	4	5 upwards	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	3	5	2	...	4	24	38
								Under 5
Homœopathic Hospital	2	...	...	...	...	2	...	5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
								Under 5	1	2	3
Millbay Barracks	3	2	1	5 upwards			
								Under 5	2	1	3	
Elphinstone Barracks	4	2	1	...	...	1	...	5 upwards	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
								Under 5
Drake's Island ...	1	...	...	...	...	1	...	5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
								Under 5	
St. Teresa's Orphanage	3	...	...	1	2	...	...	5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	..	...	3
								Under 5	1	3	4		
Workhouse ...	95	4	...	...	5	39	47	5 upwards	...	...	...	...	...	...	...	...	...	...	...	..	..	...	...	9	16	10	...	1	55	91
								Under 5
Plymouth Borough Asylum (BLACKADON, IVYBRIDGE.)	7	...	...	...	...	7	...	5 upwards	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	5	7
								Under 5	...	2	5	3	...	1	...	...	...	3	2	73	29	42	1	9	131	4	7	10	361	683	
TOTALS	1800	456	227	52	66	519	480	5 upwards	...	1	2	...	...	5	...	...	3	..	...	3	...	5	7	126	166	139	56	25	579	1117

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1895, in the County Borough of Plymouth, Urban Sanitary District; classified according to DISEASES, AGES, and LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.												
	Census 1895.	Estimated to middle of 1895.		1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
(a)	(b)	(c.)	(d.)	Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued	Relapsing	Puerperal	Cholera.	Erysipelas.			Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid	Continued	Relapsing	Puerperal	Cholera.	Erysipelas.		
Ecclesiastical Parishes—																													
St. Andrew	9363	...	...	...	4	5	1	...	3	...	..	...	...	9	...	...	...	1	...	..	..	2	...	...	...	...	1	...	...
St. Peter	11785	...	...	1	6	4	1	...	4	...	...	1	...	12	...	...	1	4	2	...	...	1	...	...	...	...	...	...	...
St. Saviour	2450	...	...	...	2	1	...	...	1	..	..	1	...	3	...	..	...	..	1	...	...	1	...	...	...	...	...	...	...
St. James	5864	...	...	...	4	...	...	...	2	...	...	1	...	3	...	...	...	1	...	...	...	1	...	..	...	...	...	...	...
All Saints	6778	...	...	...	2	3	...	...	...	...	...	1	...	7	...	...	..	2	...	...	...	...	...	...	...	...	...	...	...
Christ Church	6244	...	...	...	2	1	1	...	...	...	...	2	...	3	..	...	...	...	...	...	...	...	..	...	...	...	...	...	...
St. Matthias	4488	..	...	...	6	3	...	...	3	...	...	...	...	8	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Holy Trinity	4351	...	...	...	5	...	...	...	...	...	...	...	...	4	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...
Charles	10849	...	...	...	6	10	...	...	4	...	...	1	...	11	..	...	...	1	4	...	...	2	...	...	...	...	1	...	...
St. Jude	7557	...	...	...	17	3	...	...	5	...	...	2	...	16	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...
St. John	6964	...	...	...	10	3	1	...	2	...	...	2	...	16	..	...	...	6	...	1	..	...	...	...	...	...	...	...	...
St. Luke	3342	...	...	...	...	...	...	...	2	...	...	...	...	3	...	...	...	...	...	..	1	...	...	...	...	...	...	...	...
Emmanuel	1387	...	...	...	4	...	1	...	1	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Public Institutions—																													
S. D. & E. C. Hospital ... ..	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...
Homœopathic Hospital ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	..	..	..	1	...	...
Orphan Asylum ... ..	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	..	...	...	...	...	...
Workhouse ... ..	...	...	...	...	2	...	1	...	1	...	...	...	...	7	...	...	...	2	...	1	...	1	...	...	...	...	...	...	...
TOTALS	84248	89096	2551	1	73	33	6	...	28	...	...	11	...	108	...	...	1	32	7	2	...	9	...	...	...	...	3	...	...

